# OAKTON EAST

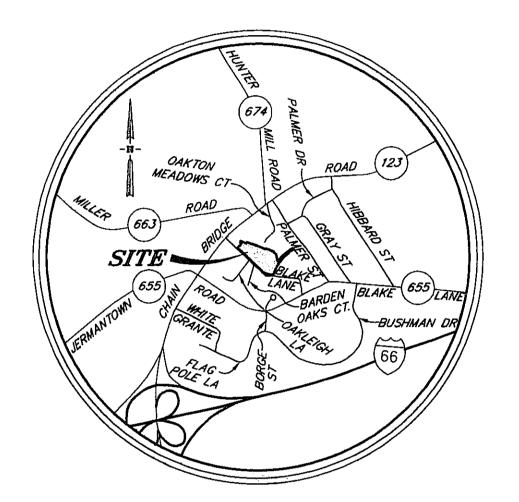
## GENERALIZED DEVELOPMENT PLAN

FAIRFAX COUNTY, VIRGINIA PROVIDENCE DISTRICT

JUNE 2010 REVISED OCTOBER 14, 2010 **REVISED NOVEMBER 12, 2010 REVISED DECEMBER 2, 2010 REVISED DECEMBER 21, 2010** 

## OWNERS/APPLICANTS.

NEIGHBORHOODS VI, LLC 11111 SUNSET HILLS ROAD SUITE 200 RESTON, VA 20190 TELEPHONE: 703.694.5000 FAX: 703.715.8076



## ENGINEERS/LANDSCAPE ARCHITECTS\_

THE BC CONSULTANTS 12600 FAIR LAKES CIRCLE SUITE 100 FAIRFAX, VA 22033 TELEPHONE: 703.449.8100 FAX: 703.449.8108

## SHEET INDEX

## ATTORNEY/AGENT

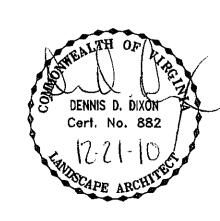
McGUIREWOODS, LLP 1750 TYSONS BOULEVARD SUITE 1800 McLEAN, VA 22102 TELEPHONE: 703.712.5000 FAX: 703.712.5297

	Sheet List Table
Sheet Number	Sheet Title
1	COVER SHEET
2	GENERALIZED DEVELOPMENT PLAN
3	GENERAL NOTES AND COMMENTS
4	EXISTING CONDITIONS AND EXISTING VEGETATION MAP
5	LANDSCAPE PLAN
6	LANDSCAPE DETAILS
7	STORMWATER MANAGEMENT PLAN
8	STORMWATER MANAGEMENT PLAN
9	ADEQUATE OUTFALL ANALYSIS
10	DOWNSTREAM IMPOUNDMENT ANALYSIS
11	PRELIMINARY TREE PRESERVATION PLAN
12	PRELIMINARY TREE PRESERVATION PLAN
13	TREE INVENTORY AND CONDITION ANALYSIS
14	TREE PRESERVATION DETAILS
15	BLAKE LANE IMPROVEMENTS PLAN
16	SIGHT DISTANCE PROFILE
17	AMENITY AREA
18	ILLUSTRATIVE ELEVATIONS

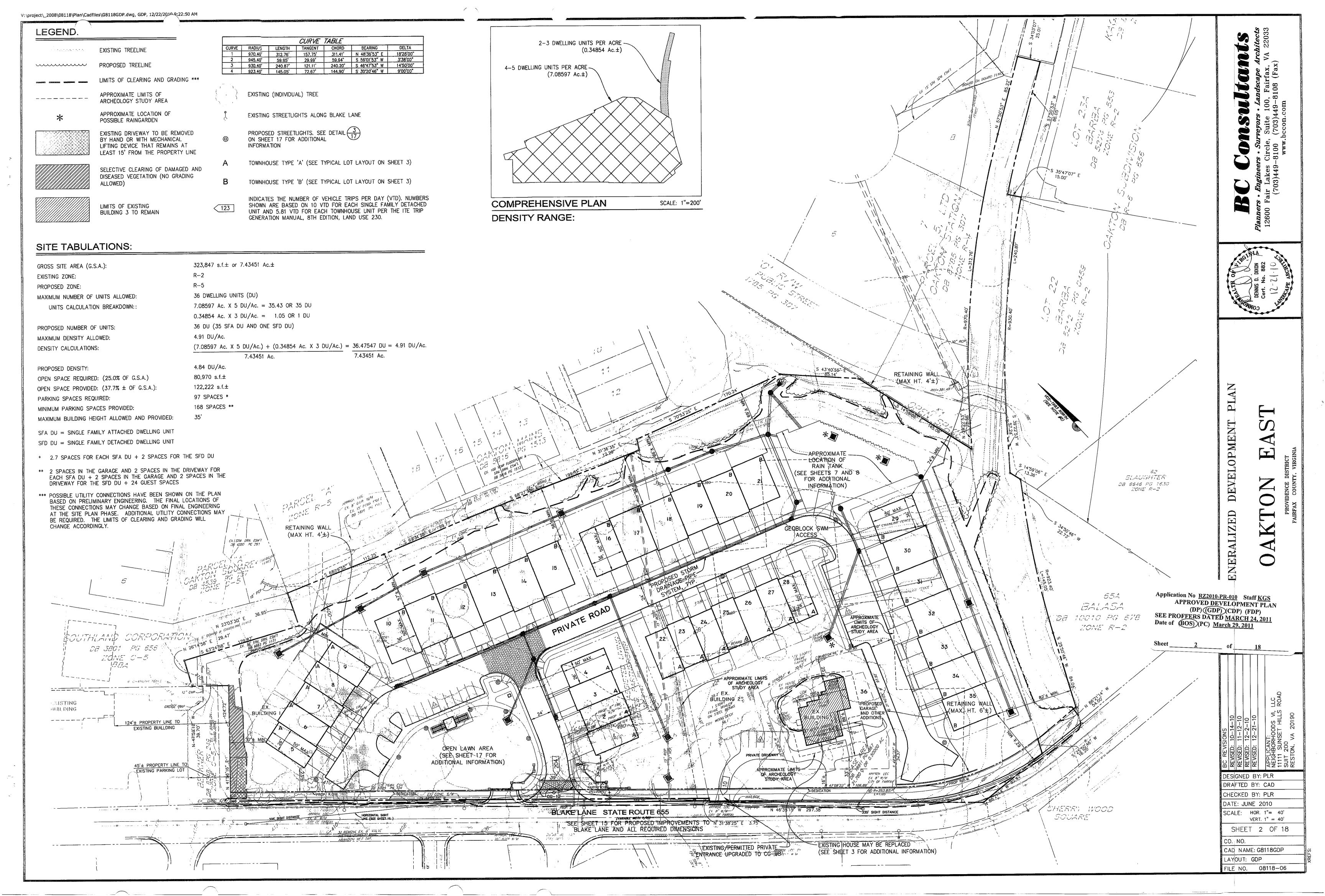
Application No RZ2010-PR-010 Staff KGS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED MARCH 24, 2011
Date of (BOS) (PC) March 29, 2011

RECEIVED

Department of Planning & Zoning DEC 22 2010



SHEET 1 OF 18 PROJECT # 08118.01.00 DATE: JUNE 2010



#### **GENERAL NOTES:**

- THE PROPERTY DELINEATED ON THIS GENERALIZED DEVELOPMENT PLAN (GDP) IS IDENTIFIED ON FAIRFAX COUNTY TAX ASSESSMENT MAP #47-2 ((1)), PARCELS 66, 67A AND 70A. ALL ARE ZONED R-2.
- THE BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON FIELD RUN SURVEYS CONDUCTED BY BC CONSULTANTS IN OCTOBER AND DECEMBER OF 2004.
- THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS FROM A FIELD RUN TOPOGRAPHIC SURVEY CONDUCTED BY BC CONSULTANTS IN OCTOBER, 2004 FOR PARCEL 70A AND FROM LOW FLIGHT AERIAL PHOTOGRAMMETRIC METHODS OBTAINED FROM AIR SURVEY CORPORATION IN DECEMBER, 2004 FOR PARCELS 66 AND 67A. THE TOPOGRAPHY IS SHOWN AT TWO (2) FEET CONTOUR INTERVALS.
- THE PROPERTY SHOWN ON THIS GDP IS IN THE PROVIDENCE MAGISTERIAL DISTRICT, THE LOWER POTOMAC SEWER DISTRICT (M-1 SEWER SUB-SHED) AND THE ACCOTINK CREEK WATERSHED.
- TO THE BEST OF OUR KNOWLEDGE THIS DEVELOPMENT IS IN CONFORMANCE WITH THE FAIRFAX COUNTY COMPREHENSIVE PLAN AND WILL CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS AND CONDITIONS WITH THE EXCEPTION OF THE FOLLOWING:
  - \* REQUEST A MODIFICATION OF THE TRANSITIONAL SCREENING ALONG THE EASTERN PROPERTY LINES (ADJACENT TO THE SINGLE FAMILY DETACHED HOMES) TO USE THE EXISTING TREES IN LIEU OF THE TREES AND SHRUBS REQUIRED FOR A TYPE 1 TRANSITIONAL SCREEN. WHERE THE INTENT OF THE TRANSITIONAL SCREENING IS NOT MET, SUPPLEMENTAL DECIDUOUS AND EVERGREEN TREES AND SHRUBS WILL BE PROVIDED AS SHOWN ON THE PLAN AND IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION. THIS REQUEST IS IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 13, PART 3, SECTION 13-305, PARAGRAPH 3.
  - \* REQUEST A WAIVER OF THE BARRIER REQUIREMENT ALONG THE EASTERN PROPERTY LINES (ADJACENT TO THE SINGLE FAMILY DETACHED HOMES) DUE TO THE TOPOGRAPHY BETWEEN THE ONSITE AND ADJACENT USES. THIS REQUEST IS IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 13, PART 3, SECTION 13-305, PARAGRAPH 12.
  - \* REQUEST A WAIVER OF THE MAXIMUM 600 FEET LENGTH OF A PRIVATE ROAD. EMERGENCY VEHICLE TURN-AROUNDS HAVE BEEN PROVIDED AT BOTH ENDS OF THE PRIVATE ROAD.
- 6. ACCORDING TO THE FAIRFAX COUNTY-COUNTYWIDE TRAILS PLAN (ADOPTED BY THE BOARD OF SUPERVISORS JUNE 17, 2002), THERE ARE NO TRAILS REQUIRED ON THIS SITE. HOWEVER, AN EXISTING 4' CONCRETE SIDEWALK IS LOCATED ALONG THE SITES FRONTAGE WITH BLAKE LANE FOR PARCEL 70A. THIS SIDEWALK SHALL BE REPLACED WITH A NEW 5' CONCRETE SIDEWALK. A NEW 5' CONCRETE SIDEWALK WILL BE CONSTRUCTED ALONG THE SITE'S FRONTAGE WITH BLAKE LANE FOR PARCELS 66 AND 67A WHERE NO SIDEWALKS CURRENTLY EXIST. SEE SHEET 15, BLAKE LANE IMPROVEMENTS PLAN FOR ADDITIONAL INFORMATION.
- THE FAIRFAX COUNTY WATER AUTHORITY IS THE PUBLIC WATER SUPPLY AGENCY FOR THIS DEVELOPMENT THE COUNTY OF FAIRFAX IS THE SANITARY SEWER SUPPLY AGENCY FOR THIS DEVELOPMENT.
- THIS PLAN SHOWS ALL KNOWN EXISTING UNDERGROUND UTILITIES AND ALL EXISTING UTILITY EASEMENTS OF 25' OR MORE. THE LOCATIONS OF THE EASEMENTS SHOWN ARE FROM TAX RECORDS AND/OR DEEDS AND INFORMATION OF RECORD TAKEN FROM A TITLE COMMITMENT FURNISHED BY STEWART TITLE GUARANTY COMPANY DATED FEBRUARY 21, 2010.
- THIS PLAN DOES NOT SHOW PROPOSED UTILITIES. ALL NECESSARY PUBLIC UTILITIES ARE READILY ACCESSIBLE TO THE SITE AND WILL BE EXTENDED BY THE DEVELOPER OR UTILITY COMPANY. UTILITY PLANS AND PROFILES WILL BE SUBMITTED IN THE FUTURE FOR CONSTRUCTION PURPOSES.
- 10. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES ON THIS SITE. IF ANY SUBSTANCES ARE FOUND, THE METHODS FOR DISPOSAL SHALL ADHERE TO COUNTY, STATE AND/OR FEDERAL LAW.
- 11. THERE ARE NO KNOWN GRAVES OR PLACES OF BURIAL ON SITE.
- 12. THE PROPOSED LIMITS OF CLEARING AND GRADING ARE SHOWN ON THE PLAN. THESE LIMITS ARE APPROXIMATE AND SUBJECT TO ADJUSTMENT AT THE TIME OF FINAL GRADING, ENGINEERING AND LOCATION OF PROPOSED UTILITIES. WHERE THE LIMITS OF CLEARING AND GRADING ARE SHOWN ADJACENT TO A PROPERTY LINE, IT SHOULD BE ASSUMED THAT THE LIMITS EXTEND TO THE PROPERTY LINE.
- 13. ANY AND ALL OFF-SITE GRADING, PARKING, ACCESS, UTILITY CROSSINGS, ETC. SHALL BE ALLOWED WITH THE PERMISSION OF THE ADJACENT HOMEOWNERS AND/OR THEIR ASSOCIATED HOMEOWNER'S ASSOCIATION.
- 14. PARKING WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE.

#### ZONING ORDINANCE, ARTICLE 18-202, PARAGRAPH 10 COMMENTS:

- A. SCALE AND NORTH ARROW AS SHOWN ON THE PLAN.
- B. THE APPROXIMATE LOCATION AND DIMENSIONS OF ALL PROPOSED STRUCTURES ARE AS SHOWN ON THE PLAN. REFER TO THE SITE TABULATIONS ON SHEET 2 FOR THE MAXIMUM HEIGHT OF ALL STRUCTURES. ANGLE OF BULK PLANE IS AS SHOWN ELSEWHERE ON THIS SHEET.
- C. THE PROPOSED TRAFFIC CIRCULATION IS AS SHOWN ON THE PLAN. REFER TO GENERAL NOTE 6 FOR INFORMATION CONCERNING THE TRAILS REQUIREMENT.
- D. OPEN SPACE AREAS, COMMUNITY FACILITIES AND/OR PUBLIC FACILITIES ARE AS SHOWN ON THE PLAN.
- E. NO MAJOR SANITARY SEWER IMPROVEMENTS ARE PROPOSED WITH THIS DEVELOPMENT.
- F. REFER TO SHEETS 7 AND 8 FOR ALL REQUIRED STORMWATER MANAGEMENT INFORMATION.
- G. THE LOCATION OF ALL EXISTING UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE, AND ALL MAJOR UNDERGROUND UTILITY EASEMENTS REGARDLESS OF WIDTH ARE AS SHOWN ON THE PLAN. REFER TO GENERAL NOTE 8 FOR ADDITIONAL INFORMATION CONCERNING UTILITY EASEMENTS.
- H. REFER TO THE SITE TABULATIONS ON SHEET 2 FOR REQUIRED PARKING SPACE INFORMATION.
- REFER TO GENERAL NOTE 2 FOR INFORMATION CONCERNING EXISTING TOPOGRAPHY.
- J. THERE IS A LARGE STAND OF MATURE TREES ALONG THE EASTERN PROPERTY BOUNDARY, A LARGE PART OF THIS STAND WILL BE PROTECTED AND PRESERVED IN ACCORDANCE WITH THE TREE PRESERVATION REQUIREMENTS OF SECTION 12 OF THE PUBLIC FACILITIES MANUAL. REFER TO SHEETS 4 AND 12 FOR ADDITIONAL INFORMATION CONCERNING THESE TREES.
- K, THE ADJACENT PROPERTIES WILL BE PROTECTED FROM ANY ADVERSE EFFECTS PROMPTED BY THE PROPOSED DEVELOPMENT BY THE PRESERVATION OF TREES ALONG THE EDGES OF THE PROPERTY AS SHOWN ON THE PLAN. ADDITIONAL TREES MAY BE PLANTED TO SUPPLEMENT THE PRESERVED TREES PROVIDING A VEGETATIVE BUFFER SHIELDING THE ADJACENT PROPERTIES. A LARGE STAND OF TREES WILL BE PRESERVED ALONG THE EASTERN PROPERTY BOUNDARY AS NOTED IN COMMENT J ABOVE, FURTHER SHIELDING THE ADJACENT PROPERTIES. INCREASED PERIPHERAL SETBACKS HAVE BEEN PROVIDED TO MAXIMIZE THE DISTANCE BETWEEN EXISTING AND PROPOSED HOMES. VEHICULAR ACCESS AND THE DIMENSIONS OF ALL PERIPHERAL YARDS ARE AS SHOWN ON THE PLAN.
- L. THE EXISTING STRUCTURES ARE AS SHOWN ON THE PLAN. REFER TO SHEET 4 FOR THEIR LOCATIONS, THE DATES OF CONSTRUCTION OF BUILDINGS 1 AND 3 ARE UNKNOWN, BUILDING 2, A TEMPORARY SALES TRAILER, WAS PLACED ON THE SITE IN 2007. BUILDINGS 1 AND 2 WILL BE DEMOLISHED OR REMOVED BUILDING 3 WILL BE RETAINED.
- M. NOT APPLICABLE. RESIDENTIAL USE.
- N. REFER TO THE SITE TABULATIONS ON SHEET 2 FOR INFORMATION CONCERNING THE PROPOSED NUMBER OF DWELLING UNITS, DENSITY AND OPEN SPACE CALCULATIONS.
- O. A LARGE OPEN SPACE RECREATIONAL AREA (OPEN LAWN AREA) IS PROPOSED WITH THIS DEVELOPMENT. THIS SPACE IS PROVIDED FOR THE PLEASURE AND ENJOYMENT OF THE RESIDENTS OF THIS DEVELOPMENT. REFER TO SHEET 17 FOR ADDITIONAL INFORMATION.
- P. IMPROVEMENTS TO THE PUBLIC ROAD (INCLUDING SIDEWALK) AND DEDICATION OF ADDITIONAL RIGHT-OF-WAY ARE AS SHOWN ON THE PLAN. SEE SHEET 15 FOR ADDITIONAL INFORMATION. THE TIMING OF THESE IMPROVEMENTS WILL DEPEND ON MARKET CONDITIONS.
- Q. THE DEVELOPMENT SCHEDULE FOR THIS PROJECT WILL DEPEND ON MARKET CONDITIONS.
- R. NO FLOODPLAINS (AS DESIGNATED BY THE FEDERAL EMERGENCY AGENCY, UNITED STATES GEOLOGICAL SURVEY OR FAIRFAX COUNTY), RESOURCE PROTECTION AREAS OR ENVIRONMENT QUALITY CORRIDORS ARE LOCATED ON THE SITE. THE ENTIRE SITE IS A RESOURCE MANAGEMENT AREA.
- S. DEDICATION AND IMPROVEMENTS TO THE PUBLIC RIGHT-OF-WAY ARE AS SHOWN ON THE PLAN. THE CENTERLINE AND ALL REQUIRED DIMENSIONS TO THE PUBLIC ROAD ARE AS SHOWN ON SHEET 15.
- T. THE APPROXIMATE LIMITS OF CLEARING AND GRADING IS AS SHOWN ON THE PLAN. INFORMATION CONCERNING PROPOSED LANDSCAPING AND SCREENING IS AS SHOWN ON SHEET 5. REFER TO SHEET 4 FOR INFORMATION CONCERNING EXISTING VEGETATION AND SHEETS 11, 12, 13 AND 14 FOR INFORMATION CONCERNING VEGETATION TO BE PRESERVED.
- U. THERE ARE NO KNOWN GRAVES OR PLACES OF BURIAL LOCATED ON THE SITE.
- V. APPLICANT AND OWNER:

NEIGHBORHOODS VI, LLC 11111 SUNSET HILLS ROAD SUITE 200 RESTON, VA 20190

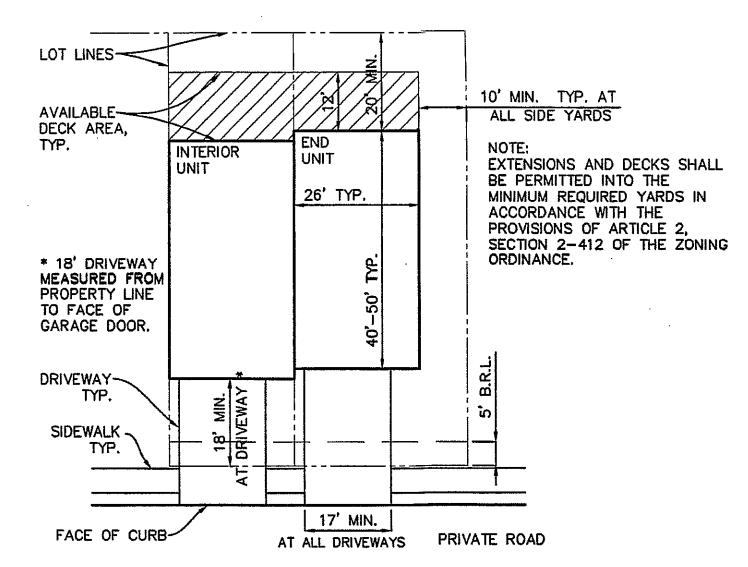
#### SINGLE FAMILY DETACHED HOUSE PHASING:

PHASE 1 SINGLE FAMILY DETACHED HOUSE LOT LAYOUT:

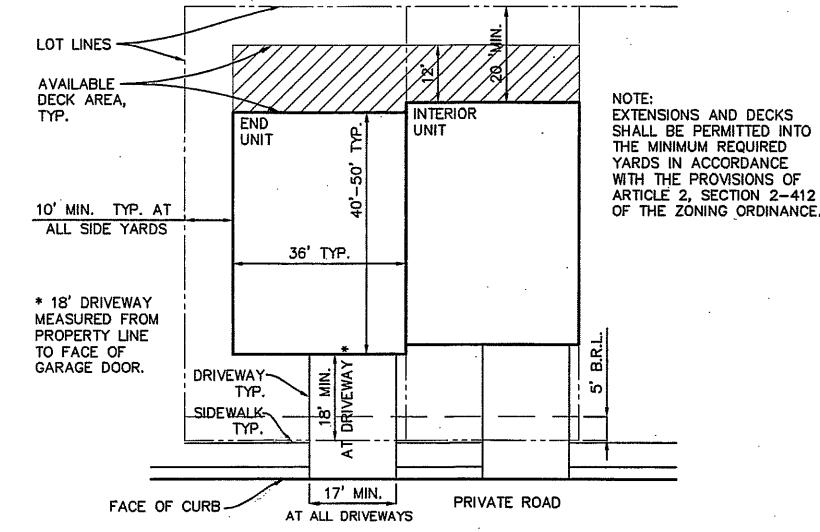
THE SINGLE FAMILY DETACH HOUSE LOT LAYOUT FOR PHASE 1 IS AS SHOWN.

PHASE 2 SINGLE FAMILY DETACHED HOUSE LOT LAYOUT:

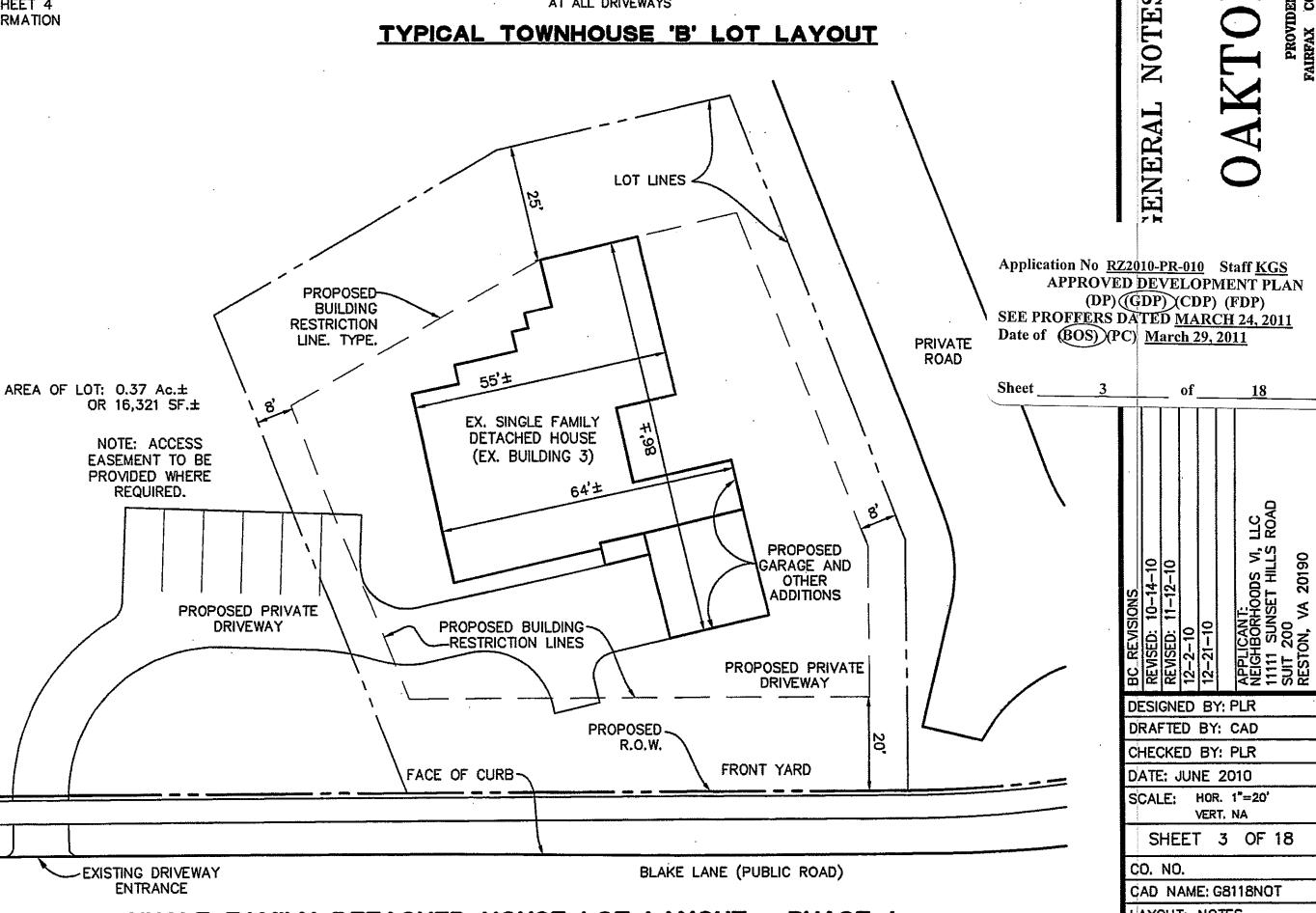
AT THE END OF THE LIFE ESTATE OF WALTER L. CHILDS AND ROBERTA B. CHILDS, THE APPLICANT RESERVES THE RIGHT TO REMOVE THE EXISTING SINGLE FAMILY DETACHED HOUSE (FROM PHASE 1) AND REPLACE IT PROVIDED THAT THE NEW SINGLE FAMILY DETACHED HOUSE DOES NOT DIMINISH THE REQUIREMENTS OF THE R-5 ZONE FOR SINGLE FAMILY DETACHED UNITS.



#### TYPICAL TOWNHOUSE 'A' LOT LAYOUT

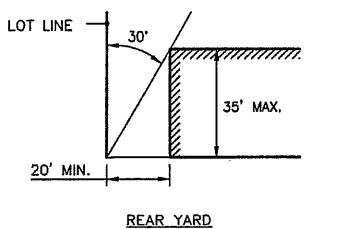


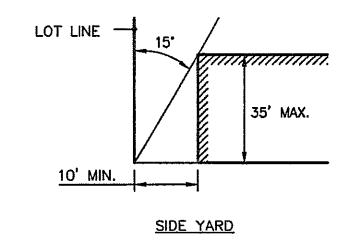
#### TYPICAL TOWNHOUSE 'B' LOT LAYOUT



# LOT LINE

FRONT YARD





FOR SINGLE FAMILY ATTACHED UNITS ONLY

#### ANGLE OF BULK PLANE

NO SCALE

SINGLE FAMILY DETACHED HOUSE LOT LAYOUT - PHASE 1

ND

日

LAYOUT: NOTES FILE NO. 08118-06

#### EXISTING VEGETATION MAP SUMMARY AND NARRATIVE

		T			
COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	AREA (Ac.±)	NARRATIVE
2	OAK, TULIP POPLAR, MAPLE	MATURE	N/A	2.09	ALTHOUGH PART OF THIS AREA IS ADJACENT TO A STREAM, MOST OF THE TREE SPECIES ARE ASSOCIATED WITH UPLAND FORESTS. UNSTORY INCLUDES MODERATE TO EXTENSIVE GROWTH OF INVASIVE PLANT SPECIES INCLUDING BRAIRS, VINES AND MULTI-FLORA ROSE.
3	NONE DOMINATE	VERY EARLY	N/A	0.14	SCATTERED AREAS OF SUCCESSIONAL GROWTH AROUND UNMAINTAINED AREAS AND ADJACENT TO FORESTED AREAS. UNSTORY PLANT MATERIAL INCLUDES MANY NATIVE AND NON-NATIVE HERBACEOUS AND INVASIVE SPECIES INCLUDING BRIARS, MULTI-FLORA ROSE, VINES AND POISION IVY.
5	N/A	N/A	N/A	0.75	AREAS OF CONSTRUCTED FEATURES INCLUDING BUILDINGS, PARKING AND ROADWAYS.
6	MAPLE, OAK, HOLLY, PINE	N/A	N/A	4.45	GRASSED AND LANDSCAPED AREAS, ATHLETIC FIELDS OR OTHER GREEN AREAS DEVOID OF NATURAL VEGETATION. THE AREAS AROUND AND BEHIND BUILDING 3 ARE GRASSLANDS MAINTAINED ON A REGULAR BASIS. TO THE NORTHEAST OF BUILDING 2 AND AROUND BUILDING 1 ARE GRASSLANDS MAINTAINED ON A SEMI—REGULAR BASIS. PORTIONS OF THE AREA BEHIND BUILDING 1 ARE EXHIBITING SIGNS OF SUCCESSIONAL GROWTH WITH THE EMERGENCE OF NATIVE HERBACEOUS PLANTS.

Total: 7.43 Ac.±

#### **EXISTING VEGETATION MAP LEGEND**

(UPLAND FOREST) h . . . . . . . . <del>.</del> COVER TYPE 3 (EARLY SUCCESSIONAL FOREST COMMUNITY) EXISTING PRE-CONSTRUCTION TREE CANOPY AREA (147,407 s.f.±)

COVER TYPE 5 (DEVELOPED AREA)

7 7 7 7 7 COVER TYPE 6 (MAINTAINED AND SEMI-MAINTAINED GRASSLAND) 7 7 7 7 7 7

EXISTING PRE-DEVELOPMENT TREE CANOPY LINE FOR ONSITE TREES ONLY

SEE SHEET 6 FOR THE TREE PRESERVATION TARGET AND STATEMENT

**EXISTING BUILDING INVENTORY** STRUCTURE TYPE HEIGHT DATE OF STATUS CONSTRUCTION 1 STORY WOOD FRAME **BUILDING 1** STRUCTURE WITH BASEMENT 20'± TO BE DEMOLISHED UNKNOWN AND A SMALL BLOCK SHED BUILDING 2 SALES TRAILER 12**'**± . 2007 TO BE REMOVED 2 STORY WOOD FRAME STRUCTURE WITH BASEMENT DETACHED GARAGE/SHED TO BE DEMOLISHED. 2 STORY WOOD FRAME STRUCTURE TO BE RETAINED. BUILDING 3 28'± UNKNOWN WITH DETACHED GARAGE/SHED VEGETATION CONDITIONS

> Application No <u>RZ2010-PR-010</u> Staff <u>KGS</u> APPROVED <u>DEVELOPMENT PLAN</u> SEE PROFFERS DATED MARCH 24, 2011
> Date of (BOS) (PC) March 29, 2011

> > DESIGNED BY: PLR

VERT. 1" = 40"

DRAFTED BY: CAD CHECKED BY: PLR DATE: JUNE 2010 SCALE: HOR. 1"= 40" SHEET 4 OF 18

CO. NO. CAD NAME: G8118EVM LAYOUT: EXISTING VEG

FILE NO. 08118-06

#### V:\project\\_2008\08118\Plan\Cadfiles\G8118lsc.dwg, LANDSCAPE, 12/21/2010 1:58:59 PM 3CHEDULE AND ILLEE CANOPY CALCULATIONS \* FINAL TREE GENUS AND SPECIES TO BE DETERMINED AT THE SITE PLAN PHASE. TREES WILL BE SELECTED FROM THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, TABLE 12.19 TREE SELECTION AND CANOPY COVER TREE CANOPY CALCUATION GUIDE OR, SUITABLE ALTERNATE TREES IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION. TOTAL CANOPY AREA NATIVE USE MUTIPLIER OF 1,5 APPLIED FOR ADDITIONAL 10-YEAR TREE CANOPY CREDIT AS SHOWN. AREA/TREE TYPE \* USE SIZE REMARKS ALTERNATE TREE USES QUALIFYING FOR ADDITIONAL 10-YEAR TREE CANOPY CREDITS WITH A MULTIPLIER OF (s.f.) (s.f.) 1.5 (AIR QUALITY, ENERGY CONSERVATION, WILDLIFE BENEFIT AND WATER QUALITY) MAY BE USED IN NATIVE \*\* 11,600 58 | CATEGORY IV DECIDUOUS TREE B&B 200 2" CAL. ACCORDANCE WITH THE PROVISIONS OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM). \*\*\* WHEN ADDED TO THE 10-YEAR TREE CANOPY CREDIT RECEIVED FOR TREE PRESERVATION (SEE THE 10-YEAR 2,000 B&B 100 20 | CATEGORY II—III DECIDUOUS TREE 2" CAL. TREE CANOPY CALCULATIONS SHOWN ON SHEET 6), THE 32,700 s.f. TOTAL REPRESENTS THE MINIMUM 10-YEAR TREE CANOPY CREDIT FOR TREES TO BE PLANTED NECESSARY TO ACHIEVE THE OVERALL TREE CANOPY REQUIRED FOR THE SITE. NO LESS THAN THE QUANITY AND CREDIT FOR TREES SHOWN IN THE CATEGORY III-IV EVERGREEN TREE NATIVE \*\* B&B 150 2,100 2" CAL. PLANT SCHEDULE WILL BE PROVIDED. TREES PLANTED THAT DO NOT MEET THE MINIMUM RESTRICTIVE 6,100 CATEGORY II EVERGREEN TREE NATIVE \*\* 2" CAL. B&B 100 REQUIREMENTS OF THE PFM WILL NOT RECEIVE CANOPY CREDIT. IF NEEDED, ADDITIONAL TREES WILL BE PROVIDED TO MEET THE MINIMUM 10-YEAR TREE CANOPY FOR THE SITE. AT THEIR DISCRETION, THE SUBTOTAL 21,800 APPLICANT RESERVES THE RIGHT TO PROVIDE ADDITIONAL TREES ABOVE AND BEYOND THOSE REQUIRED TO NATIVE MULTIPLIER \*\* 1.5 MEET THE MINIMUM CANOPY REQUIREMENTS. 32,700 \*\*\* TOTAL POSSIBLE UTILITY CONNECTIONS HAVE BEEN SHOWN ON THE PLAN BASED ON PRELIMINARY ENGINEERING. THE FINAL LOCATIONS OF THESE CONNECTIONS MAY CHANGE BASED ON FINAL ENGINEERING AT THE SITE PLAN PHASE. ADDITIONAL UTILITY CONNECTIONS MAY BE REQUIRED. THE LIMITS OF CLEARING AND GRADING WILL CHANGE ACCORDINGLY. LEGEND (CATEGORY IV DECIDUOUS TREE) INTERIOR PARKING LOT SHADE TREE EXISTING TREES TO BE PRESERVED (SEE SHEET 11 AND 12 ) (CATEGORY IV DECIDUOUS TREE) LARGE EVERGREEN TREE (CATEGORY III-IV EVERGREEN TREE) SMALL EVERGREEN TREE (CATEGORY II EVERGREEN TREE) EXISTING TREES TO BE REMOVED (SEE SHEET 11 AND 12 ) ORNAMENTAL TREE (CATEGORY II-III DECIDUOUS TREE) DECIDUOUS OR EVERGREEN SHRUB EXISTING TREELINE LIMITS OF CLEARING AND GRADING \*\*\*\* PROPOSED TREELINE AREA OF MODIFIED TYPE I TRANSITIONAL SCREENING. SEE GENERAL NOTE 5 ON SHEET 3 FOR ADDITIONAL INFORMATION. POST DEVELOPMENT 10-YEAR TREE CANOPY CREDIT AREA (26,182 S.F.) INTERIOR PARKING LOT AREA (30,637 S.F.) SUITABLE EXISTING TREES MAY BE IDENTIFIED DURING THE SITE VISIT WITH THE URBAN FORESTOR SLAUGHTER FOR TRANSPLANTATION TO OTHER AREAS ON SITE ANDS DB 6646 PG 163 ZOME R-2 PRIOR TO CONSTRUCTION ACTIVITIES. 2. SEE SHEET 6 FOR TREE PRESERVATION TARGET AND NARRATIVE (10-YEAR TREE CANOPY CALCULATIONS). SEE SHEET 6 FOR INTERIOR PARKING LOT LANDSCAPING CALCULATIONS. PERIPHERAL PARKING LOT LANDSCAPING IS NOT REQUIRED. Application No RZ2010-PR-010 Staff KGS APPROVED DEVELOPMENT PLAN (DP) (GDP) (CDP) (FDP) SEE PROFFERS DATED MARCH 24, 2011 Date of (BOS) (PC) March 29, 2011 SEE SHEET +FOR AMENITY AREA DETAILS BUILDING DESIGNED BY: PLR DRAFTED BY: CAD CHECKED BY: PLR DATE: JUNE 2010

SCALE: HOR. 1"= 40'

CAD NAME: G8118LSC LAYOUT: LANDSCAPE FILE NO. 08118-06

CO. NO.

SHEET 5 OF 18

SHERRY WOOD

VERT. 1" = 40'

This compilation of selected portions of the Public Facilities Manual is intended to summarize and clarify regulations pertaining to the implementation of landscape plans on development sites subject to review and inspection by the County. Included are regulations governing the most common areas of noncompliance experienced by staff in the course of conducting landscape inspections, and a brief summary of the policy regarding seasonal landscape deferrals.

#### Tree Species and Size

- 1. Trees and shrubs that are planted shall be of the species and size specified on the approved plans. There shall be no deviations from the approved sizes specified except as approved by Fairfax County Urban Forest Management (UFMD). (PFM 12-0705.1A)
- 2. All trees and shrubs shall meet the standards for sizes and quality specified in the American Association of Nurserymen's American Standard for Nursery Stock, (ANSI Z60.1-1996). See attachment #1. (PFM 12-0705.1B)

- Species substitutions within the tree categories listed in Table 12.19 are generally accepted unless otherwise specified by proffered conditions, development conditions, special exceptions, or special permits. Any tree substitution shall also be in conformance with the following. (PFM 12-0705.1C) a. Plant Diversity - The use of substitutions shall not result in any species making up more than 10
- percent of the total number of trees required to be planted on the site. (PFM 12-0514.1L) b. Authorization - A letter signed by the permittee shall be provided to UFMD acknowledging any
- proposed substitutions to trees and shrubs shown on the approved plans. (PFM 12-0705.1C(2)) c. Substitutions Outside of Tree Category - Substitution of a tree shown on the approved plan from one tree category, as listed in PFM Table 12.19, with a tree from a different category shall require
- a revision to the approved plan. (PFM 12-0805.1C(3)) d. Species Suitability - Substituted species must be suited to the post-development conditions of the

Wildlife Benefits, PFM 12-0509.4B(4)

planting location for which it is intended. (PFM 12-0601.1E) e. Additional Tree Cover Credit - In cases where additional tree cover credit has been given, no tree substitutions shall be made except as approved by the Urban Forest Management. Examples of Air Quality, PFM 12-0509.4B(1) additional credit include the following: Water Quality, PFM 12-0509.4B(3) Energy Conservation, PFM 12-0509.4B(2)

Native Trees, PFM 12-0509.4B(5)

- 4. Planting locations of all trees on the site shall be in substantial conformance with the approved plan. UFMD acknowledges that not all trees may be optimally located, as shown on the plan, and encourage input from Permittees and their landscape professionals regarding proposed improvements that might be implemented. Any substantive deviations from the approved plan that are made in the field must be approved by UFMD and shall be in conformance with the following:
- a. Planting Area At least the minimum size planting area shall be provided for each tree according to its projected 10-year tree cover area as found in Table 12.7. (PFM 12-0601.1B)
- b. Environmental Conditions Light, moisture, and other conditions affecting the health and viability of the tree at the field location shall be suitable for the species. (PFM 12-0601.1E)
- c. Compacted Soil If planting in areas that have been previously compacted, the soil shall be properly prepared (tilled and amended as needed based on soil samples) to a depth of 12 inches, prior to installation of landscape material. Soil within individual planting holes shall not be amended. (PFM 12-0705.3B)
- d. Restrictive Barriers Trees shall be planted no closer than four feet from any restrictive barrier.
- d. Spacing Trees shall be spaced so that the outer limit of their projected 10-year tree cover area, as indicated in Table 12.19, does not significantly overlap; or as determined appropriate by UFMD for site conditions and to promote long-term survival. (PFM 12-0509.4E(6))
- e. Easements Trees for tree cover credit shall not be planted within any existing or proposed public utility easement or within five feet of storm drainage easements that contain pipes. In addition, trees shall not be planted in an area that will interfere with existing or proposed utilities or with maintenance of the utility, as determined by the Director of DPWES. (PFM 12-0514.6B)

#### Staking and Guying

5. Staking and guying should only be implemented where site conditions warrant their use. Planted trees should be assessed individually and staking and guying installed only as required. Conditions where staking and guying may be necessary to ensure stability include: windy locations, steep slopes, or where vandalism may be a concern. All staking and guying material must be removed within one year of plant installation (PFM 12-0705.3C)

#### Seasonal Landscape Deferrals

- 6. A Seasonal Landscape Deferral may be granted when seasonal or weather-related conditions, such as excessively wet soil, extended periods of drought, or frozen ground, substantially reduce the survivability of the plant material, as determined by the Urban Forest Management. A request for a landscape deferral will not be granted for landscaping required prior to the issuance of a RUP or Non-RUP when seasonal or weather-related conditions on the site plan do not preclude planting. Lack of species availability may justify the approval of a Seasonal Landscape Deferral when specific plant species are required by proffers or conditions.
- 7. The party responsible for the placement of the performance bond and conservation deposit for the project shall act as the Applicant for this seasonal deferral. Seasonal Landscape Deferral request forms can be obtained from the Environmental and Facilities Inspections Division or the Urban Forest Management.
- 8. At the time of final inspection for release of performance bond and conservation deposit, all of the plant material is inspected. Plant material previously inspected, as part of the process to release any deferral deposit that may have existed, is not exempt from this final inspection. All plant material must be healthy and in good condition.

#### Requirements Prior to Approval of RUP/Non-RUP

9. The landscaping and screening requirements of Article 13 or of any approved proffered condition, special permit, special exception or variance must be completed prior to approval of any Residential or Non-Residential Use Permit; provided, however, that completion of the requirements may be delayed when justification satisfactory to the Director is provided; such justification shall include an agreement and bond with surety satisfactory to the Director for completion in accordance with a firm schedule for timely completion. (ZO 18-704.3) See Seasonal Landscape Deferrals above.

#### TREE PRESERVATION TARGET AND STATEMENT (10-YEAR TREE CANOPY CALCULATIONS) \*

A.	TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT	Totals (s.f.
A1	Pre-development Area of Existing Tree Canopy	147,4
A2	Percentage of Gross Site Area Covered by Existing Tree Canopy (A1/B1)	45.
A3	Percentage of 10-year Tree Canopy Required for the Site (R-5 Zone)	2
A4	Percentage of the 10-Year Tree Canopy Requirement That Should be Met Through Tree Preservation	45.
A5	Proposed Percentage of Canopy Requirement That Will be Met Through Tree Preservation (C10/B7)	52.
A6	Has the Tree Preservation Target Minimum Been Met?	Yes
A7	If A6 is no, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in §12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be meet. Provide sheet number where deviation request is located. The narrative shall be prepared in accordance with §12-0507.4.	N/A
	TREE CANOPY REQUIREMENT	
<b>B.</b>	Identify Gross Area	323,8
B2	Subtract Areas Dedicated to Parks, and Road Frontage	11,
	Subtract Area of Exemption	
B3	Adjusted Gross Site Area B1- (B2+B3)	311,9
B4	Identify Site's Zoning and/or Use	R-5 Zor
B5	Percentage of 10-Year Tree Canopy Required	7
B6	Area of 10 Year Tree Canopy Required (B4xB6)	62,3
B7		No
B8	Modification of 10-Year Tree Canopy Requirements Requested	N/A
В9	If B8 is Yes, Then List Plan Sheets Where Modification Request is Located	IV/A
С.	TREE CANOPY PRESERVATION	
C1	Tree Preservation Target Area (B7 x A4)	28,
C2	Total Canopy Area Meeting Standards of §12-0200	26
C3	C2 x 1.25	32
C3.1	Total Canopy Area Meeting Standards of §12-0200 But Does Not Qualify for Bonus Multiplier	
C3.1	C3.1 x 1.00	
	Total Canopy Area Provided by Unique or Valuable Forest or Woodland Community	
C4	C4 x 1.5	
C5	Total Canopy Area Provided by "Heritage," Memorial," Specimen," or "Street Tree"	
C6	C6 x 1.5 to 3.0	
C7	Canopy Area of Trees Within Resource Protection Areas and 100-Year Floodplains	
C8.	Canopy Area of frees within Resource Protection Areas and 100 feat Floodplants  C8 x 1.0	
C9		
	Totals of C3, C3.1, C5, C7 and C9	32
C10	Totals of C3, C3.1, C5, C7 and C9	
C10 D.	Totals of C3, C3.1, C5, C7 and C9	
D: D:	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)	
D. D1 D2	Totals of C3, C3.1, C5, C7 and C9	
D. D1 D2 D3	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5	
D. D1 D2 D3 D4	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation	
D. D1 D2 D3 D4 D5	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5	
D1 D2 D3 D4 D5 D6	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits	
D. D1 D2 D3 D4 D5 D6 D7	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25	
D1 D2 D3 D4 D5 D6 D7	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits	
D1 D2 D3 D4 D5 D6 D7 D8	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5	29,
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11	Totals of C3, C3.1, C5, C7 and C9  FREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12	Totals of C3, C3.1, C5, C7 and C9  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Carropy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided Cultivars and Varieties	29,
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided Cultivars and Varieties  D12 x 1.25	29,
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14,1 D15	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  D15 x 1.0	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1 D15 D15.1 D16	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided Dy Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  D15 x 1.0  Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1 D15 D15.1	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  D15 x 1.0  Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14  Area of Canopy Planted With No Multiplier	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1 D15 D15.1 D16	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Water Quality Benefits  D8 x 1.5  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  D15 x 1.0  Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14  Area of Canopy Planted With No Multiplier  Total Canopy Area Provided Through Tree Planting	29, 21 32
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1 D15 D15.1 D16 D16.1	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D6 x 1.5 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Planted With No Multiplier Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1)	29,
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D14.1 D15 D15.1 D16 D16.1	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Planted With No Multiplier Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested?	29, 21 32 No
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D15.1 D16 D16.1 D17	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D8 x 1.5 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested? Tree Bank or Tree Fund	29, 21 32 No
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15,1 D16 D16,1 D17	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D8 x 1.5 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested? Tree Bank or Tree Fund Canopy Area Requested to be Provided Through Offsite	29, 21 32 No
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D15.1 D16 D16.1 D17 D18 D18 D19	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Planted With No Multiplier Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested? Tree Bank or Tree Fund Canopy Area Requested to be Provided Through Offsite Banking or Tree Fund	29, 21 32 No
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D15.1 D16 D16.1 D17 D18 D18 D19	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Water Quality Benefits  D8 x 1.5  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  D15 x 1.0  Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14  Area of Canopy Planted With No Multiplier  Total Canopy Area Provided Through Tree Planting  (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1)  Is an Offsite Planting Relief Requested?  Tree Bank or Tree Fund  Canopy Area Requested to be Provided Through Offsite  Banking or Tree Fund  Amount to be Deposited into the Tree Preservation and	29, 21 32 No
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D15.1 D16 D16.1 D17 D18 D19 D20	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D6 x 1.5 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Provided Through Tree Planting Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested? Tree Bank or Tree Fund Canopy Area Requested to be Provided Through Offsite Banking or Tree Fund Amount to be Deposited into the Tree Preservation and Planting Fund	29, 21 32 No
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D15.1 D16 D16.1 D17 D18 D19 D20 D21	TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Planted for Wildlife Benefits  D8 x 1.5  Area of Canopy Provided by Native Species  D10 x 1.05  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  Canopy Area Provided Through Tree Planting  (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1)  Is an Offsite Planting Relief Requested?  Tree Bank or Tree Fund  Canopy Area Requested to be Provided Through Offsite  Banking or Tree Fund  Amount to be Deposited into the Tree Preservation and Planting Fund	29, 21 32 No N/A
D. D	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D8 x 1.5 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Planted With No Multiplier Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested? Tree Bank or Tree Fund Canopy Area Requested to be Provided Through Offsite Banking or Tree Fund Amount to be Deposited into the Tree Preservation and Planting Fund  TOTAL OF 10-YEAR TREE CANOPY PROVIDED	29, 21 32 No N/A
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D15.1 D16 D16.1 D17 D18 D19 D20 D21	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10)  Area of Canopy Planted for Air Quality Benefits  D2 x 1.5  Area of Canopy Planted for Energy Conservation  D4 x 1.5  Area of Canopy Planted for Water Quality Benefits  D6 x 1.25  Area of Canopy Planted for Wildlife Benefits  D6 x 1.25  Area of Canopy Provided by Native Species  D10 x 1.5  Area of Canopy Provided by Improved Cultivars and Varieties  D12 x 1.25  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Tree Seedling  D14 x 1.0  Area of Canopy Provided Through Native Shrubs or Wood Seed Mix  D15 x 1.0  Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14  Area of Canopy Area Provided Through Tree Planting  (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1)  is an Offsite Planting Relief Requested?  Tree Bank or Tree Fund  Canopy Area Requested to be Provided Through Offsite  Banking or Tree Fund  Amount to be Deposited into the Tree Preservation and Planting Fund  TOTAL OF 10-YEAR TREE CANOPY PROVIDED	29, 21 32 No N/A
D. D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14.1 D15 D15.1 D16 D16.1 D17 D18 D19 D20 D21 E. E1	Totals of C3, C3.1, C5, C7 and C9  TREE PLANTING  Area of Canopy to be Met Through Tree Planting (B7-C10) Area of Canopy Planted for Air Quality Benefits D2 x 1.5 Area of Canopy Planted for Energy Conservation D4 x 1.5 Area of Canopy Planted for Water Quality Benefits D6 x 1.25 Area of Canopy Planted for Water Quality Benefits D8 x 1.5 Area of Canopy Planted for Wildlife Benefits D8 x 1.5 Area of Canopy Provided by Native Species D10 x 1.5 Area of Canopy Provided by Improved Cultivars and Varieties D12 x 1.25 Area of Canopy Provided Through Tree Seedling D14 x 1.0 Area of Canopy Provided Through Native Shrubs or Wood Seed Mix D15 x 1.0 Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14 Area of Canopy Planted With No Multiplier Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1) Is an Offsite Planting Relief Requested? Tree Bank or Tree Fund Canopy Area Requested to be Provided Through Offsite Banking or Tree Fund Amount to be Deposited into the Tree Preservation and Planting Fund  TOTAL OF 10-YEAR TREE CANOPY PROVIDED	N/A 32 32

\* THE AREAS USED FOR THE 10-YEAR TREE CANOPY CALCULATIONS ARE APPROXIMATE AND MAY CHANGE WITH FINAL ENGINEERING PROVIDED THAT THE MINIMUM TREE PRESERVATION TARGET AREA HAS BEEN MET AND THE REQUIRED 10-YEAR TREE CANOPY HAS BEEN PROVIDED.

#### TRANSITIONAL SCREENING AND BARRIERS

MODIFICATION OF TRANSITIONAL SCREENING AND WAIVER OF BARRIER REQUIREMENTS REQUESTED. SEE GENERAL NOTE 5 ON SHEET 3 FOR ADDITIONAL INFORMATION.

#### INTERIOR PARKING LOT LANDSCAPING CALCULATIONS

INTERIOR PARKING LOT AREA:

 $30,637 \text{ s.f.}\pm$ 

AREA REQUIRED FOR INTERIOR PARKING LOT LANDSCAPING: 0.05 X 30,637 s.f. = 1,532 s.f. ±

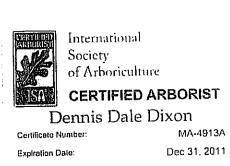
NUMBER OF SHADE TREES REQUIRED AT 250 s.f. PER TREE: 1,532 s.f./250 s.f. = 6.10 OR 7 TREES

NUMBER OF SHADE TREES PROVIDED AT 250 s.f. PER TREE: 7 TREES

PERIPHERAL PARKING LOT LANDSCAPING CALCULATIONS

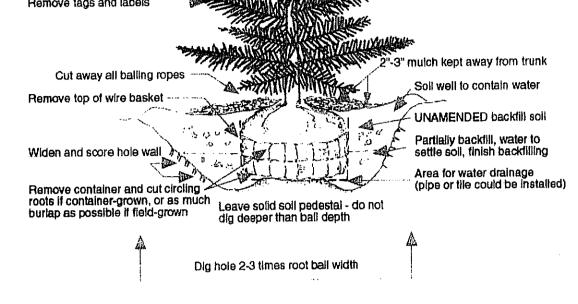
NOT APPLICABLE

#### **CERTIFIED ARBORIST**



DO NOT prune terminal leader or branch tips Prune rubbing or Prune narrow crotch angles DO NOT stake or wrap DO NOT stake trunk Prune broken branches Remove tags and labels Remove tags and labels Prune suckers 2"-3" mulch kept away from trunk Cut away all balling ropes Remove top of wire basket UNAMENDED backfill soll Partially backfill, water to settle soil, finish backfilling Widen and score hole wall Widen and score hole wall Area for water drainage (pipe or tile could be installed) Remove container and cut circling Remove container and cut circling . roots if container-grown, or as much roots if container-grown, or as much buriap as possible if field-grown Dig hole 2-3 times root ball width

TREE PLANTING GUIDELINE



DO NOT prune terminal

2 EVERGREEN PLANTING GUIDELINE

NOT TO SCALE

NOTE: SEE SHEET 5 FOR PLANT SCHEDULE AND TREE CANOPY CALCULATION FOR PROPOSED TREES TO BE PLANTED.

ETAILS LANDSCAPE

Application No RZ2010-PR-010 Staff KGS APPROVED DEVELOPMENT PLAN (DP) (GDP) (CDP) (FDP) SEE PROFFERS DATED MARCH 24, 2011 Date of (BOS) (PC) March 29, 2011

> 2-10 DESIGNED BY: PLR DRAFTED BY: CAD

> > CHECKED BY: PLR DATE: JUNE 2010 SCALE: HOR. NA VERT. NA SHEET 6 OF 18

CAD NAME: G8118LSCDET LAYOUT: LSC DETAILS FILE NO. 08118-06

A3 3.61

0.49 AC.

B Soil

SCALE: 1"=200"

#### REZONING STORMWATER MANAGEMENT NARRATIVE

PRE-DEVELOPMENT CONDITIONS

THIS 7.43 ACRE SITE CURRENTLY CONTAINS AN EXISTING SALES TRAILER AND PARKING AREA, TWO EXISTING SINGLE FAMILY DETACHED RESIDENCES AND IS ZONED R-2. THE ADJACENT PARCELS ARE RESIDENTIAL AND COMMERCIALLY ZONED. THE SOUTHERN BORDER OF THE SITE RUNS ALONG EXISTING BLAKE LANE (STATE ROUTE 655). THIS SITE IS LOCATED WITHIN THE ACCOTINK CREEK WATERSHED. WATER FROM THE SITE DRAINS NORTHEAST, OVERLAND, INTO AN EXISTING FLOODPLAIN (DB 5772, PG 1381). OFFSITE WATER MAINLY COMES FROM COLLECTION ALONG BLAKE LANE WHERE INLETS ARE CENTRALLY LOCATED ALONG THE SOUTHERN BOUNDARY OF THE SITE. THE !NLETS CONNECT TO AN EXISTING YARD INLET. THE WATER IS THEN CONVEYED THROUGH STORM SEWER THROUGH THE CENTER OF THE SITE UNTIL IT OUTFALLS INTO THE EXISTING FLOODPLAIN EASEMENT ALONG THE NORTHERN BORDER OF THE SITE.

POST-DEVELOPMENT CONDITIONS

THE PROPOSED CONDITIONS FOR THE SITE IS FOR 35 TOWNHOUSE UNITS AND ONE OF THE EXISTING HOUSES TO REMAIN. A SUB-SURFACE DETENTION FACILITY CONSISTING OF A 'RAINTANK' \* (TRADEMARK) BRAND UNDERGROUND INFILTRATION FACILTY OR OTHER SIMILAR INFILTRATION SYSTEM (COLLECTIVELY CALLED RAINTANK HENCEFORTH) WILL COLLECT WATER FROM THE COMBINATION OF OVERLAND FLOW AND A PROPOSED STORM SEWER SYSTEM. ROUGHLY 5.33 ACRES ONSITE AND 0.49 ACRES OFFSITE ARE DETAINED IN THIS STORMWATER MANAGEMENT FACILITY. THE RAINTANK SYSTEM DETAINS THE STORMWATER RUNOFF IN ORDER TO MEET THE MAXIMUM ALLOWABLE RELEASE. REFER TO THE ALLOWABLE RELEASE COMPUTATIONS, OUTFLOW COMPUTATIONS, AND VOLUME TABLE ON THIS SHEET. THE FACILITY OUTFALLS INTO THE EXISTING FLOODPLAIN (DB 5772, PG 1381). STORMWATER MANAGEMENT REQUIREMENTS HAVE BEEN MET, AS THE POST-DEVELOPMENT PEAK RELEASE RATES FOR THE 2 AND 10-YEAR STORMS ARE LESS THAN PRE-DEVELOPMENT LEVELS.

BEST MANAGEMENT PRACTICE (BMP) NARRATIVE

THE 7.43 ACRE SITE IS IN THE ACCOTINK CREEK WATERSHED. THIS SITE REQUIRES 40% PHOSPHOROUS REMOVAL EFFICIENCY AS IT IS CONSIDERED A 'NEW DEVELOPMENT' IN FAIRFAX COUNTY. BMP COMPUTATIONS ARE BASED ON THE OCCOQUAN METHOD AND RESULT IN A 42.2% PHOSPHOROUS REMOVAL. (SEE COMPUTATIONS ON THIS SHEET). THE BMP REQUIREMENTS WILL BE MET BY INFILTRATING THE FIRST 0.5" OF RUNOFF THROUGH A GRAVEL BED BENEATH THE RAINTANK. GENERALLY, SOILS IN THIS AREA HAVE INFILTRATION RATES SUFFICIENT TO FACILITATE THE PROPER USE OF A RAINTANK FACILITIES, BUT FINAL DESIGN AND LOCATION IS DEPENDENT UPON FIELD VERIFICATION OF THE SOIL INFILTRATION RATES BY A QUALIFIED GEOTECHNICAL ENGINEER. SHOULD THE WATER TABLE ELEVATION PRECLUDE THE USE OF INFILTRATION, BMP's WILL BE PROVIDED THROUGH A COMBINATION OF RAINGARDENS, FILTERRAS AND

THE COUNTY CONSIDERS A RAINTANK AS A 'SUB-SURFACE' DETENTION FACILITES (SSDF). THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) ALLOWS THE USE OF A SSDF IN A RESIDENTIAL DEVELOPMENT. AN 'UNDERGROUND' DETENTION SYSTEM (UDS) IS NOT ALLOWED IN A RESIDENTIAL DEVELOPMENT AND REQUIRES A WAIVER OF THE PFM REQUIREMENTS FOR ITS USE THERE. SSDF AND UDF DIFFER IN THE SIZE OF THEIR COMPONENTS, ACCESSIBLITY AND SAFETY CONCERNS. A MODIFICATION OF THE PFM MAY BE REQUIRED FOR THE USE OF A SSDF WITH THIS DEVELOPMENT. IF REQUIRED, THE MODIFICATION REQUEST WILL BE MADE AT THE SITE PLAN PHASE. IN THE EVENT THAT ANY MODIFICATION REQUEST, IF REQUIRED, IS NOT APPROVED OR SOILS ARE NOT SUFFICIENT TO SUPPORT AN INFILTRATION SYSTEM THEN ANOTHER BMP FACILITES WILL BE USED AS APPROVED BY THE FAIRFAX COUNTY DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES.

\* THE 'RAINTANK' (TMK) BRAND IS A MODULAR SYSTEM OF SMALL CRATES THAT MAY BE STACKED TO PROVIDE A DRAINAGE SYSTEM THAT STORES STORMWATER RUNOFF AND ALLOWS IT TO INFILTRATE INTO

#### **BMP FACILITY DESIGN CALCULATIONS**

II. WATERSHED INFORMATION

PART 1: LIST ALL OF THE SUBAREAS AND "C" FACTORS USED IN THE BMP COMPUTATIONS

SUBAREA DESIGNATION & DESCRIPTION AREA (AC.) 5.33 Onsite to Infiltration Onsite Uncontrolled 0.49 Offsite to Infiltration

A) AREA OF	THE SITE		(a)_	7.43	_ACRE	S
B) SUBARE	A DESIGNATION (1)	"C" (2)		AREA (AC.) (3)		PRODUCT (4)
B1	Onsite to Infiltration	0.61	Х	5.33	=	3.25
B2	Onsite Uncontrolled	0.32	X	2.10	=	0.67
			Х		=	
			(b) T	OTAL	= -	3.92
C) WEIGHTE	ED AVERAGE "C" FACTOR		(	(b) / (a) = (c)		0.53

PART 3: COMPUTE THE TOTAL PHOSPHORUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION	BMP TYPE	REMOVAL EFF. (%)		AREA RATIO		"C" FACTOR RATIO		PRODU
(1)	(2)	(3)		(4)		(5)		(6)
B1	Onsite to Infiltration	50	Х	0.72	Х	1.15	=	41.40
B2	Onsite Uncontrolled	0	X	0.28	X	0.60	=	0.00
B3	Offsite to Infiltration	50	X	0.01	X	1.43	=	0.72

PART 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

(A) SELECT REQUIREMENT: (FAIRFAX COUNTY CHESAPEAKE BAY PRESERVATION AREA - 40%) OR (FAIRFAX COUNTY WATER SUPPLY OVERLAY DISTRICT - 50%)

42.12 % > LINE 4(a) (B) IF LINE 3 (a) THEN PHOSPHORUS REMOVAL REQUIREMENT IS SATISFIED.

# ALLOWABLE RELEASE COMPUTATIONS

OAKTON EAST - Stormwater Management Allowable Release Computations

Onsite Pre-Development: Flow Calculations Pre-Devel. I (in./hr) Area (Ac.) Peak Flow (cfs) Storm Frequency 5.45 2-Year (Site Area) 7.27 1.00 10-Year (Site Area)

Post-Development: Controlled/Uncontrolled Areas

			Post-Develop.
Description:	Weighted "C"	Area (Ac.)	Peak Flow/(cfs
Onsite Detained			
2-Year	0.61	5.33	17.77
10-Year	0.61	5.33	23.71
Onsite Undetained			
2-Year	0.32	2.11	3.67
10-Year	0.32	2.11	4.90
	Total Onsite Area =	7.43	
Offsite Detained			
2-Year	0.76	0.49	2.03
10 Voor	0.76	0.49	271 I

OVERALL CITE Book Dovolonment Discharge

OVERALL SITE Post-Development Discharge										
	Proportional Improvem	Post-Onsite		Post-Development						
Storm Frequency	Release (cfs)	+	Undetained (cfs)	=	Outflow (cfs)					
2-Year	0.63	+	3.67	=	4.30					
10 Voor	2.20	+	4 90	=	7.10					

\*\*Time of concentration for pre and post development computations is 5 minutes.

### INFILTRATION TEST RESULTS

INFILTRATION TEST RECORD/CALCULATION Date: 10/8/2010 Job Name: Oakton East - Infiltration

Recommended Rate-1/2 Av.. Fall: 1.2

Onsite & Offsite Composite 'C' to Detention Facility = 0.62

Job No: 10947-B	Job Name: Oakton East - Infiltration					Date: 10/8/2010
Boring No: B-2			Reference	Depths for	Test (In):	
Perc Hole Depth (in	.): 60.0		1	48.0		24"= 36.00
Test Intervals/Duration (Hrs.)	0.00	1.00	2.00	3.00	4.00	
Duration	0:00	1:00	2:00	3:00	4:00	
Actual Test Time (Start/Finish)	14:30	15:30	16:30	17:30	18:30	
Measured Depth to water (in.)	60.00	38.00	39.50	40.25	41.00	
Measured Depth. Added initial	34.00	38.00	39.50	40.25	41.00	
Head (in.)	26.0	22.0	20.5	19.8	19.0	
Fall (in.)		4.0	1.5	0.8	0.8	
1 (111)		<u> </u>		Calcula	ted Infilt	ration Rate (in./hr.):
				Avg. Fail C	over 4 hou	urs: 1.75
				Recomme	nded Rat	e-1/2 Av Fall: 0.9

Borina No: B-3

oring No: B-3						
		Reference	Depths for	Test (In):		
Perc Hole Depth (in.	12" =	47.5		24"= 35.50		
st Intervals/Duration (Hrs.)	0.00	1.00	2.00	3.00	4.00	
ration	0:00	1:00	2:00	3:00	4:00	
tual Test Time (Start/Finish)	14:32	15:32	16:32	17:32	18:32	
asured Depth to water (in.)	59.50	40.50	42.25	43.25	44.25	
asured Depth. Added initial	34.50	40.50	42.25	43.25	44.25	
ad (in.)	25.0	19.0	17.3	16.3	15.3	
l (in.)		6.0	1.8	1.0	1.0	
	1,		···		ited Infiltra Over 4 hours	tion Rate (in./hr.): : 2.4375

INFILTRATION TESTING PERFORMED BY ECS, LTD.

INFILTRATION DESIGN CALCULATIONS

PART 1: DETERMINE DESIGN INFILTRATION RATE (A) SOIL CLASSIFICATION (B) HYDROLOGIC SOIL GROUPING (C) MINIMUM INFILTRATION RATE (f) 1.75 in./hr (PER FIELD RUN DATA-SEE THIS SHEET) (D) DESIGN INFILTRATION RATE  $(f_d)$ (PER GEOTECH RECOMMENDATION- SEE SHEET 19A) (a) 0.90 in./hr PART 2: DETERMINE MAXIMUM STORAGE TIME (A) MAXIMUM STORAGE TIME,  $T_{max} =$ 

PART 3: DETERMINE MAXIMUM ALLOWABLE DEPTH OF THE FACILITY (A) VOID RATIO FOR STONE RESERVOIRS USING 1.5 TO 3.5 INCH STONE - VDOT NO. 1 COARSE-GRADED AGGREGATE

(B) MAXIMUM ALLOWABLE DEPTH OF THE FACILITY

PART 4: DETERMINE MINIMUM BOTTOM SURFACE AREA REQUIRED

 $d_{max} = f_d * t_{max} / V_r$ 

(A) WATER QUALITY VOLUME REQUIREMENTS FOR SITE, VOL WQ

(B) MINIMUM BOTTOM SURFACE AREA OF THE FACILITY  $SA_{min} = VOL_{WQ} / (f_d * T_{max} * 1/12)$ 

(e) / ((a) \* (b)) = (f) 1,593 sq. ft PART 5: ACTUAL BMP VOLUME PROVIDED IN THE INFILTRATION TRENCH

(A) SURFACE AREA AND DEPTH PROVIDED LENGTH = N/A\_ WIDTH = (g) \* (h) = (l) 8,536 sq. ftLENGTH \* WIDTH = 1,83 ft

(B) DEPTH PROVIDED (C) BMP VOLUME PROVIDED FOR IN THE INFILTRATION TRENCH

> 6,248 cu. ft VOLUME (FROM POND ROUTING) =

Application No RZ2010-PR-010 Staff KGS APPROVED DEVELOPMENT PLAN (DP) (GDP) (CDP) (FDP) SEE PROFFERS DATED MARCH 24, 2011 Date of (BOS) (PC) March 29, 2011

DESIGNED BY: PLR DRAFTED BY: CAD

ATER

(e) 5,735 cf

CHECKED BY: PLR DATE: JUNE 2010 SCALE: HOR. N/A VERT. N/A SHEET 7 OF 18 CO. NO.

CAD NAME: G8118SWM-01 LAYOUT: SWM1 FILE NO. 08118-06

#### OUTFALL 'A' PRE-DEVELOPMENT TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet Mannings n Hydraulic Length 100.00 ft 2yr, 24hr P 3.2000 in .050000 ft/ft .28 ft/sec Avg. Velocity Segment #1 Time: 6.06 min Segment #2: Tc: TR-55 Shallow Hydraulic Length 90.00 ft .067000 ft/ft Unpaved 4.18 ft/sec Avg. Velocity Segment #2 Time: .36 min Segment #3: Tc: TR-55 Shallow Hydraulic Length 240.00 ft .025000 ft/ft Unpaved 2.55 ft/secAvg. Velocity Segment #3 Time: 1.57 min Segment #4: Tc: TR-55 Channel 8.4000 sq.ft Flow Area Wetted Perimeter 10.46 ft Hydraulic Radius .80 ft .040000 ft/ft Slope Mannings n Hydraulic Length 330.00 ft 5.15 ft/sec Avg. Velocity

#### OUTFALL 'A' ONSITE PRE-DEVELOPMENT FLOW SUMMARY

Node ID	Ret Type Eve		HYG Vol cu.ft	Trun	Qpeak min	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*OUTFLOW *OUTFLOW *OUTFLOW	JCT JCT JCT	2 10 1	7907 25699 4700		722.50 720.00 722.50	2.44 9.54 1.18		
RAINFALL RAINFALL RAINFALL	AREA AREA AREA	2 10 1	7907 25699 4700		722.50 720.00 722.50	2.44 9.54 1.18		

Segment #4 Time: 1.07 min

Total Tc: 9.05 min

\_\_\_\_\_\_

•	OUTFALL ANALYSIS OUTFAL		IONS		
RT 1: LIST ALL <u>QF THE SUBAREAS V</u>	VITH CN NUMBERS AND COMP	UTE THE AVERAGI	E CN FOR THE	OUTFALL	
GOOD FORESTED CONDITION					5505110#
SUBAREA & DESCRIPTION	<u>CN</u> 55	X	AREA (AC.) 2.53		PRODUCT 139.15
A1 Woods: Soil B A2 Woods: Soil C	70	X	2.00	=	140.00
		TOTAL	4.53	=	279.15
WEIGHTED AVERAGE CN		TOTAL =	AREA / PRO	DUCT =	62
POST DEVELOPMENT					
SUBAREA & DESCRIPTION	CN		AREA (AC.)		PRODUCT
A3 S.F.A.: Soil B	92	X	3.61	<del>=</del> =	332.12 161.68
A4 S.F.A.: Soil C	94	X	1.72	=	
		TOTAL	5.33	2	493.80
					00
) WEIGHTED AVERAGE CN RT 2: COMPUTE THE DEPTH OF RAII ) CALCULATE THE RAINFALL AMOUN			PRO / PRO	DUCT =	93
RT 2: COMPUTE THE DEPTH OF RAIN CALCULATE THE RAINFALL AMOUN (FROM TABLE 6.23 OF THE PFM)	NT (P) FOR THE 1-, 2-, AND 10-Y	EAR, 24-HOUR STO	DRM.	-	93
RT 2: COMPUTE THE DEPTH OF RAIN  CALCULATE THE RAINFALL AMOUN				5.2"	93
RT 2: COMPUTE THE DEPTH OF RAIN CALCULATE THE RAINFALL AMOUN (FROM TABLE 6.23 OF THE PFM)	NT (P) FOR THE 1-, 2-, AND 10-Y	EAR, 24-HOUR STO	DRM. P <sub>10</sub> =	5.2"	
RT 2: COMPUTE THE DEPTH OF RAIN CALCULATE THE RAINFALL AMOUN (FROM TABLE 6.23 OF THE PFM) $P_1 =                                   $	NT (P) FOR THE 1-, 2-, AND 10-Y $P_2 = $ d) IN INCHES $GOC$	EAR, 24-HOUR STO	DRM. P <sub>10</sub> =	-	
CALCULATE THE RAINFALL AMOUN (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $\frac{1000}{CN} - \frac{100}{CN} - \frac{10}{2} = \frac{1000}{CN} - \frac{10}{2} = \frac{10}{2} =$	NT (P) FOR THE 1-, 2-, AND 10-Y $P_2 = $ d) IN INCHES $GOC$	EAR, 24-HOUR STO  3.2"  DD FORESTED CON	ORM. $P_{10} = _{\underline{}}$ SIDITION POS	5.2" ST DEVELOPMEN	
CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $S = \frac{1000}{CN} - 10$ $d = \frac{(P - 0.2 S)^2}{CN}$	P <sub>2</sub> =	EAR, 24-HOUR STO 3.2"  OD FORESTED CON S = 6.13	ORM.  P <sub>10</sub> =  NDITION POS S =	5.2" ST DEVELOPMEN 0.75	
CALCULATE THE RAINFALL AMOUN (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $\frac{1000}{CN} - \frac{100}{CN} - \frac{10}{2} = \frac{1000}{CN} - \frac{10}{2} = \frac{10}{2} =$	P <sub>2</sub> =	EAR, 24-HOUR STO 3.2"  DD FORESTED CON S = 6.13  d <sub>1</sub> = 0.29"	DRM.  P <sub>10</sub> =  NDITION POS S = d <sub>1</sub> =	5.2" ST DEVELOPMEN 0.75 1.97"	
CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $S = \frac{1000}{CN} - 10$ $d = \frac{(P - 0.2 S)^2}{CN}$	P <sub>2</sub> =	EAR, 24-HOUR STO 3.2"  DD FORESTED CON $S = 6.13$ $d_1 = 0.29$ " $d_2 = 0.48$ "	ORM. $P_{10} = \phantom{AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA$	5.2" ST DEVELOPMEN 0.75 1.97" 2.45"	
CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $S = \frac{1000}{CN} - 10$ $d = \frac{(P - 0.2 S)^2}{P + 0.8 S}$	P <sub>2</sub> = GOO	3.2"  DD FORESTED CONS = 6.13  d <sub>1</sub> = 0.29" d <sub>2</sub> = 0.48" l <sub>10</sub> = 1.56"	ORM. $P_{10} = \phantom{AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA$	5.2" ST DEVELOPMEN 0.75 1.97" 2.45"	
RT 2: COMPUTE THE DEPTH OF RAIN CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $\frac{1000}{CN} - 10$ ) $d = \frac{(P - 0.2S)^2}{P + 0.8S}$ RT 3: CALCULATE THE 1-YEAR POST	P <sub>2</sub> = GOO	3.2"  DD FORESTED CON S = 6.13  d <sub>1</sub> = 0.29" d <sub>2</sub> = 0.48" l <sub>10</sub> = 1.56"	ORM. $P_{10} = $ $S = $ $d_1 = $ $d_2 = $ $d_{10} = $	5.2" ST DEVELOPMEN 0.75 1.97" 2.45"	T
RT 2: COMPUTE THE DEPTH OF RAIN CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $\frac{1000}{CN} - 10$ ) $d = \frac{(P - 0.2S)^2}{P + 0.8S}$ RT 3: CALCULATE THE 1-YEAR POST	P <sub>2</sub> =  d) IN INCHES  GOO  T DEVELOPMENT VOLUME  VATER TO BE DETAINED FOR 1  ES) x d (INCHES) / 12 (INCHES/F	3.2"  DD FORESTED CONS = 6.13  d1 = 0.29" d2 = 0.48"  110 = 1.56"  -YEAR STORM	ORM. $P_{10} = $ $S = $ $d_1 = $ $d_2 = $ $d_{10} = $	5.2" ST DEVELOPMEN 0.75 1.97" 2.45" 4.40"	T
CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $\frac{1000}{CN} - \frac{10}{CN}$ $d = \frac{(P - 0.2S)^2}{P + 0.8S}$ OETERMINE TOTAL VOLUME OF WALLS AREA (ACRES	P <sub>2</sub> =  d) IN INCHES  GOO  T DEVELOPMENT VOLUME  VATER TO BE DETAINED FOR 1  ES) x d (INCHES) / 12 (INCHES/F	3.2"  DD FORESTED CONS = 6.13  d1 = 0.29" d2 = 0.48"  110 = 1.56"  -YEAR STORM	ORM. $P_{10} = $ $S = $ $d_1 = $ $d_2 = $ $d_{10} = $	5.2"  ST DEVELOPMEN 0.75  1.97" 2.45" 4.40"	T 38,115 cuft
RT 2: COMPUTE THE DEPTH OF RAIN CALCULATE THE RAINFALL AMOUNT (FROM TABLE 6.23 OF THE PFM) $P_1 = 2.7''$ DETERMINE THE RUNOFF DEPTH ( $\frac{1000}{CN} - 10$ ) $d = \frac{(P - 0.2S)^2}{P + 0.8S}$ RT 3: CALCULATE THE 1-YEAR POSTON DETERMINE TOTAL VOLUME OF WALL OF THE ORIGINAL PROBLEM (ACRES) SUBTRACT VOLUME DETAINED IN	P <sub>2</sub> =  d) IN INCHES  GOO  T DEVELOPMENT VOLUME  VATER TO BE DETAINED FOR 1  ES) x d (INCHES) / 12 (INCHES/F  BMP VOLUME (FROM BMP CO	3.2"  DD FORESTED CONS = 6.13  d1 = 0.29" d2 = 0.48" -YEAR STORM FOOT)  MPUTATIONS)	ORM. $P_{10} = $ $S = $ $d_1 = $ $d_2 = $ $d_{10} = $	5.2"  ST DEVELOPMEN 0.75  1.97" 2.45" 4.40"	T

(B) PEAK OUTFLOW RATE (Qp) AT THE MAXIMUM HEAD FOR DRAWDOWN TIME OF 24 HOURS.

 $Q_p = 0.7489 \text{ cfs}$  $Q_p = \frac{r_{1-x_R}}{0.5x_{3,600x24}}$  $A_{1-YR} = 0.0820 \text{ sq. ft.}$ 

(D) MAXIMUM DIAMETER OF CIRCULAR ORIFICE

(C) REQUIRED ORIFICE AREA

MAXIMUM DIAMETER = 3.88"

PART 8: DETERMINE ALLOWABLE RELEASE

(A) DETERMINE THE VOLUME OF RUNOFF FOR EACH STORM TO BE ANALYZED

V = DRAINAGE AREA (ACRES) x d (INCHES) / 12 (INCHES/FOOT)

GOOD FORESTED CONDITION  $V_2 = 7,893 \text{ cu.-ft.}$ 25,652 cu.-ft.

POST DEVELOPMENT  $V_2 = 47,402$  cu.-ft.  $V_{10} = 85,131 \text{ cu.-ft.}$ 

(B) DETERMINE THE PROPORTIONAL IMPROVEMENTS FOR EACH STORM TO BE ANALYZED

(C) DETERMINE THE ALLOWABLE PEAK RELEASES

PROPORTIONAL IMPROVEMENT RELEASE GOOD FORESTED CONDITION RELEASE  $Q_2 = 0.40 \text{ cfs} = 2.42 \times (1 - R_2)$  $Q_2 = 2.42 \text{ cfs}$  $Q_{10} = 2.87 \text{ cfs} = 9.54 \text{ x} (1 - R_{10})$  $Q_{10} = 9.54 \text{ cfs}$ 

 $R_2 = 83.35\%$  $R_{10} = 69.87\%$ 

PART 9: MAXIMUM ALLOWABLE OUTFALL

	PROPORTIONAL		UNDETAINED		* OFFSITE		MAX
STORM	IMPROVEMENT	_	TO OUTFALL	+	DETAINED	=	ALLOWABLE
FREQUENCY	RELEASE (CFS)		A (CFS)		(CFS)		OUTFLOW (CFS)
$Q_2 =$	0.40	-	1.12	+	1.48	=	0.76
Q <sub>10</sub> =	2.87	-	2.87	+	2.71	=	2.71
<b>G</b> (10 "					<del></del>		

#### DETENTION FACILITY DISCHARGE SUMMARY

Return Event	Total Depth in	Rainfall Type	RNF ID
1	2.7000	Synthetic Curve	TypeII 24hr
2	3.2000	Synthetic Curve	TypeII 24hr
10	5.2000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

Node ID		Туре	Return Event	HYG Vol cu.ft	Trun	Qpeak min	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
ONSITE ONSITE ONSITE		AREA AREA AREA	2 10 1	49658 90520 39699		714.00 714.00 714.00	20.33 36.03 16.38		
*OUTFLOW *OUTFLOW *OUTFLOW		JCT JCT JCT	2 10 1	43523 84385 33564		810.00 765.00 813.00	.63 2.20 .54		
POND POND POND	IN IN IN	POND POND POND	2 10 1	49658 90520 39699		714.00 714.00 714.00	20.33 36.03 16.38		
POND POND POND	OUT OUT OUT	POND		43523 84385 33564		810.00 765.00 813.00	.63 2.20 .54	388.09 390.92 387.22	33202 56101 26115

# OUTFALL 'A' ONSITE UNCONTROLLED FLOW SUMMARY

Return Event	Total Depth in	Rainfall Type	RNF ID
2	3.2000	Synthetic Curve	TypeII 24hr
10	5.2000	Synthetic Curve	TypeII 24hr
1	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(\*Node=Outfall; +Node=Diversion;) (Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak min	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*OUTFLOW *OUTFLOW *OUTFLOW	JCT JCT JCT	2 10 1	2796 6938 1932		717.00 717.00 717.00	1.12 2.87 .74		
UNDETAINED UNDETAINED UNDETAINED	AREA AREA AREA	2 10 1	2796 6938 1932		717.00 717.00 717.00	1.12 2.87 .74		

#### DETENTION VOLUME

Elevation (ft)	Planimeter (sq.in)	Area A1+A2+ (sq.ft)	sqr(A1*A2) (sq.ft)	Volume Vol	ume Sum (cu.ft)
384.00	=	8536	0	0	0
391.12		8536	25608	60776	60776

POND VOLUME EQUATIONS

\* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) \* (EL2-EL1) \* (Area1 + Area2 + sq.rt.(Area1\*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment Area1, Area2 = Areas computed for EL1, EL2, respectively Volume = Incremental volume between EL1 and EL2

> VOLUME COMPLETELY FILLED WITH MATERIAL (Adjust Volumes for Voids)

> > Void Spaces = 95.00000 %

Adjusted, cu.ft Total, cu.ft HW Elv, ft \_\_\_\_\_ 384.00 60776 57737 391.12

> MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs: Special Permits (8-011 2J & 2L) Special Exceptions (9-011 2J & 2L)

Commercial Revitalization Districts (9-622 2A (12) & (14)) Cluster Subdivision (9-615 1G & 1N) Development Plans PRC District (16-302 3 & 4L) PRC Plan (16-303 1E & 10) FDP P Districts (except PRC) (16-502 1F & 1Q) Amendments (18-202 10F & 10I)

1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on

Sheet 2\_. 3. Provide: On-site area Off-site area Drainage Footprint Storage If pond, dam served (acres) served (acres) area (acres) area (sf) Volume (cf) height (ft) 5.09 0.38 5.47 6.370 33,000 N/A

(DP) (GDP) (CDP) (FDP) SEE PROFFERS DATED <u>MARCH 24, 2011</u> Date of (BOS) (PC) March 29, 2011

Totals		
4. Onsite drainage channels, outfalls and pipe systems are sh Pond inlet and oulet pipe systems are shown on Sheet 2	own on Sheet	2

5. Maintenance access (road) to stormwater management facility(les) are shown on Sheet 2.

Type of maintenance access road surface noted on the plat is GEDBLOCK (asphalt, geoblock, gravel, etc.).

6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 5¢11.

7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet \_\_\_\_\_.

8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet \_\_\_\_\_.

9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet \_\_\_\_\_.

10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 2 +3.

11. A submission waiver is requested for \_\_\_

12. Stormwater management is not required because

EMENT

TORMWATER Application No <u>RZ2010-PR-010</u> Staff <u>KGS</u> APPROVED DEVELOPMENT PLAN

> DESIGNED BY: PLR DRAFTED BY: CAD CHECKED BY: PLR

DATE: JUNE 2010 SCALE: HOR. N/A VERT, N/A SHEET 8 OF 18 CO. NO. CAD NAME: G8118SWM-01 LAYOUT: SWM2

FILE NO. 08118-06

#### CROSS SECTION B-B

383	CROSS SECTION	. —
381	100YR WSE	
379	=382.70 (CMPS THIS SCA SHEET) 1"=5	'LE
	1"=5	'-H
	0 5 10 15 20	

#### CROSS SECTION C-C

	·		<del></del>								
383					EX.	GRADE @					
381		amminings me decoupes or the surpression com-			chos.	3 32071010			1		/
379							'				SCALE 1"=5'-V
	0	5	10	15	20	25	30	35	40	45	1"=5'-н 50

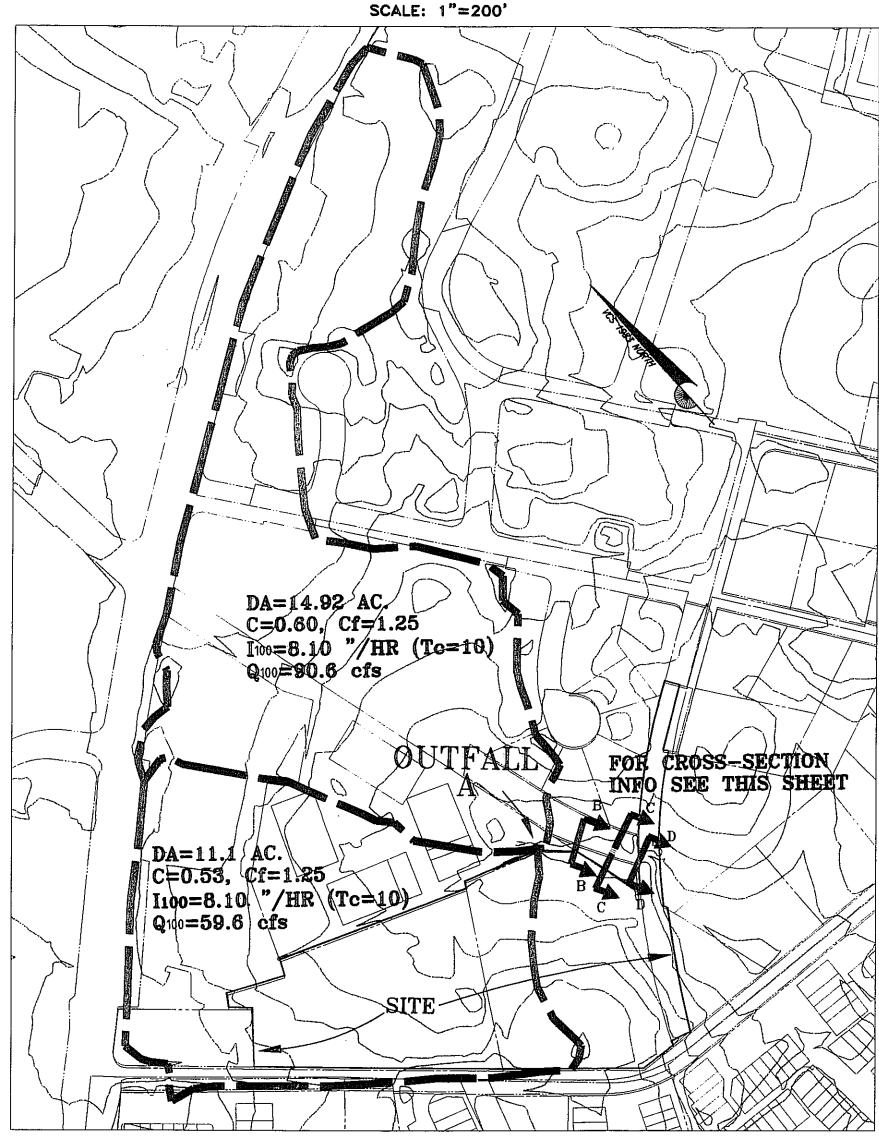
#### CROSS SECTION D-D

	382			EX.	GRADE @ S-SECTION			
	380				3 SECTION			SCALE
	378							1"=5'-V 1"=5'-H
•		5	$\cap$	Ç.	5 1	$\cap$ 1	5 2	

#### 100-YR. WATER SURFACE ELEV.-CROSS SECTION B-B

*	Norksheet for 10	00yr Cross	-Section B-E	8
Project Description		pilo Lington Pilo	Milyal I Park	
Friction Method	Manning Formula			
Solve For	Normal Depth			
Input Data		ii iin ee ma <sub>ti</sub>		
Channel Slope		0.02800	ft/ft	
Discharge	Q=Cf X (	(CIA)= 150.16	$ft^3/s = 1.25 X$	.57 X 8.10 X 26.0
Section Definitions				
Station (ft)		Elevation (ft)		
	0+00		383.31	
	0+04		381.07	
	0+08		380.34	
	0+11		380.55	
	0+15		382.55	
g				
Start Station		nding Station	Ř	ughness Coefficient
			Ró i, 382.55)	ughness Coefficient 0.045
Start Station				
Start Station (04 Results			i, 382.55)	0.045
Start Station (D- Results: Jormal Depth		(0+15	i, 382.55)	0.04
Start Station (0- Results ormal Depth levation Range low Area	+00, 383.31)	(0+15 2.36 21.34	ft ft²	0.04
Start Station (0- Results  formal Depth levation Range low Area Vetted Perimeter	+00, 383.31)	(0+15 2.36 21.34 14.85	ft R <sup>2</sup>	0.04
Start Station (0- Results  Jormal Depth Jevation Range Jow Area Vetted Perimeter Jop Width	+00, 383.31)	2.36 21.34 14.85 13.73	ft	0.04
Start Station  (December 2)  Results  Jormal Depth  Jevation Range  Jow Area  Vetted Perimeter  Jop Width  Jormal Depth	+00, 383.31)	2.36 21.34 14.85 13.73 2.36	ft  ft  ft  ft  ft	0.04
Start Station  (0-4)  Results  Jormal Depth  Jevation Range  Jow Area  Vetted Perimeter  Jop Width  Jormal Depth  Jormal Depth	+00, 383.31)	2.36 21.34 14.85 13.73 2.36 2.35	ft  ft  ft  ft  ft  ft  ft  ft	0.045
Start Station  (0-4) Results Formal Depth Elevation Range Flow Area Vetted Perimeter Fop Width Formal Depth Critical Depth Critical Slope	+00, 383.31)	2.36 21.34 14.85 13.73 2.36 2.35 0.02830	ft	0.045
Start Station  (December 2)  Results  Formal Depth  Elevation Range  Flow Area  Vetted Perimeter  For Width  Formal Depth  Critical Depth  Critical Slope  Velocity	+00, 383.31)	2.36 21.34 14.85 13.73 2.36 2.35 0.02830 7.04	ft  ft  ft  ft  ft  ft  ft  ft	0.045
Start Station  (0-4) Results Formal Depth Elevation Range Flow Area Vetted Perimeter Fop Width Formal Depth Critical Depth Critical Slope	+00, 383.31)	2.36 21.34 14.85 13.73 2.36 2.35 0.02830 7.04 0.77	ft  ft  ft  ft  ft  ft  ft  ft  ft  ft	0.045
Start Station  (O-Case Start Station)  Results  Formal Depth Elevation Range Flow Area  Vetted Perimeter Flop Width Formal Depth Critical Depth Critical Slope Felocity Felocity Felocity	+00, 383.31)	2.36 21.34 14.85 13.73 2.36 2.35 0.02830 7.04 0.77	ft  ft  ft  ft  ft  ft  ft  ft  ft  ft	0.045

#### CROSS SECTION LOCATION MAP



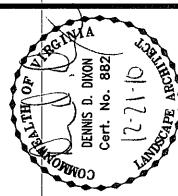
#### EXTENT OF REVIEW AND OUTFALL NARRATIVE

A TOTAL OF 4.53 ACRES OF THE SITE FLOWS TO OUTFALL POINT 'A' IN EXISTING CONDITIONS. WITH THE POST-DEVELOPED CONDITION, A TOTAL OF 5.09 ACRES ONSITE WILL OUTFALL AT POINT 'A' AFTER BEING DETAINED IN THE UNDERGROUND DETENTION FACILITY. THE REMAINING 2.35 ACRES ONSITE IS UNDETAINED SHEET FLOW AND THE PEAK RATE OF RUNOFF FOR THIS AREA AFTER DEVELOPMENT DOES NOT EXCEED THE PREDEVELOPMENT PEAK RATE. THEREFORE, PER PFM SECTION 6-0202.6, The PROJECT may continue to discharge stormwater VIA SHEET FLOW into THE lower lying property. THE DRAINAGE DIVERSION FROM 4.53 TO 5.09 ACRES IS PERMISSIBLE UNDER PFM SECTION 6-0202.2A(4) AS JUSTIFIED BY THE FOLLOWING: THE DOWNSTREAM DRAINAGE SYSTEM REMAINS ADEQUATE AS SHOWN BY THE 100 YEAR WATER SURFACE ELEVATION WHICH REMAINS IN THE EXISTING CHANNEL. NO NEW FLOODPLAIN AREAS ARE CREATED BY THIS DIVERSION AS THE DRAINAGE AREA CONTINUES TO REMAIN UNDER 70 ACRES AT OUTFALL POINT 'A'. THEREFORE, COMPLIANCE ISSUES WITH PROVISIONS GOVERNING ELEVATIONS AND PROXIMITY TO 100-YEAR WATER SURFACE ELEVATIONS DO NO APPLY. RPA BOUNDARIES DO NOT EXIST WITHIN OR NEAR THE SITE. THE STREAM THAT RUNS PARALLEL TO THE NORTHERN BOUNDARY IS AN INTERMITTENT STREAM AND THERE ARE NO OTHER STREAMS THAT RUN THROUGH OR AROUND THE SITE. LASTLY, THE ACCOTINK CREEK WATERSHED DRAINAGE AREA IS NOT CHANGED BY THIS DIVERSION.

THE DETENTION METHOD HAS BEEN UTILIZED IN SIZING THE FACILITY, THUS THE 1-YEAR STORM WILL BE DETAINED IN THE FACILITY FOR 24-HOURS AND PROPORTIONAL IMPROVEMENTS WILL BE APPLIED TO THE 2- AND 10-YEAR STORM EVENTS. EXTENT OF REVIEW WILL BEGIN AT POINT 'A'. IMMEDIATELY DOWNSTREAM OF POINT 'A' IS A CONFLUENCE POINT OF THE RECEIVING CHANNEL FLOWING PARALLEL TO THE NORTHERN SITE PROPERTY LINE WITH A DRAINAGE AREA OF 11.1-ACRES AND ANOTHER EXISTING CHANNEL. THE CONVERGING CHANNEL HAS A DRAINAGE AREA OF 14.9 ACRES, WHICH IS AT LEAST 90% OF THE SITE DRAINAGE AREA AT THE BEGINNING OF EXTENT OF REVIEW (PFM 6-0203.2A). EXTENT OF REVIEW WILL END 150' DOWNSTREAM OF THIS POINT WHERE 3 FIELD RUN CROSS SECTIONS ('B-B', 'C-C', AND 'D-D') HAVE BEEN TAKEN PER PFM 6-0203.2D AND ARE SHOWN ON THIS SHEET. PER PFM 6-0203.2D, SINCE THE DETENTION METHOD HAS BEEN UTILIZED AND A DEFINED CHANNEL EXISTS, IT IS THE ENGINEER'S OPINION THAT THE OUTFALL IS ADEQUATE AND THAT THERE WILL BE NO FLOODING OF EXISTING DOWNSTREAM DWELLINGS OR BUILDINGS BY THE 100-YEAR STORM EVENT AS DEPICTED IN CROSS-SECTION 'B-B' THIS SHEET.

• Surveyors • Landscape Arcircle, Suite 100, Fairfax, VA

ners · Engineers · Surve



OAKTON EAST

Application No <u>RZ2010-PR-010</u> Staff <u>KGS</u>

APPROVED <u>DEVEL</u> OPMENT PLAN

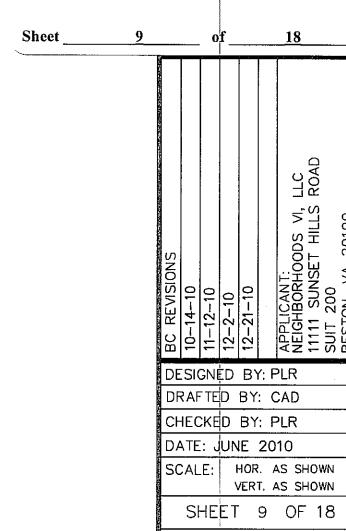
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED <u>MARCH 24, 2011</u>

Date of <u>BOS</u>) (PC) <u>March 29, 2011</u>

OUTFALL

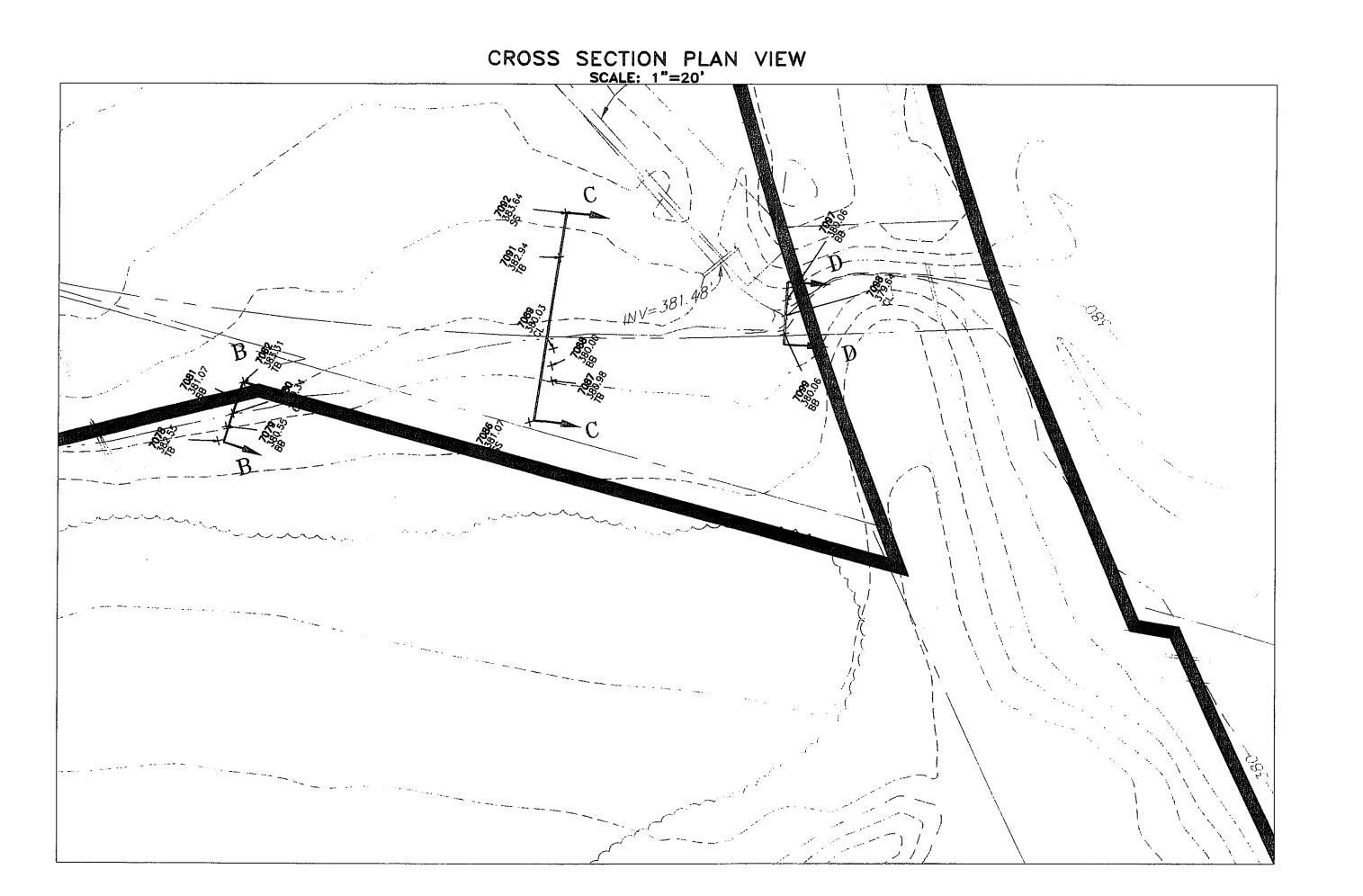
ADEQUATE

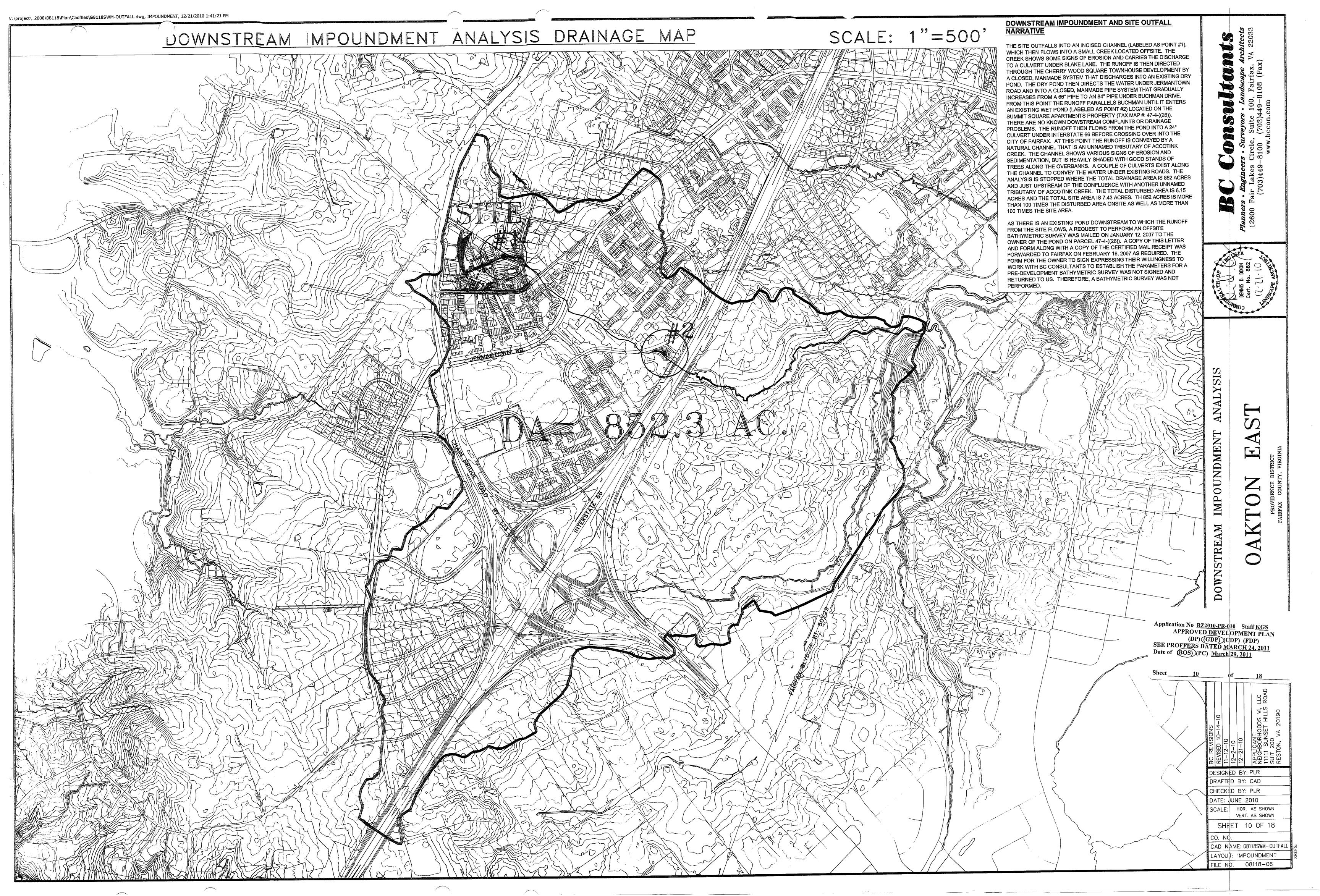


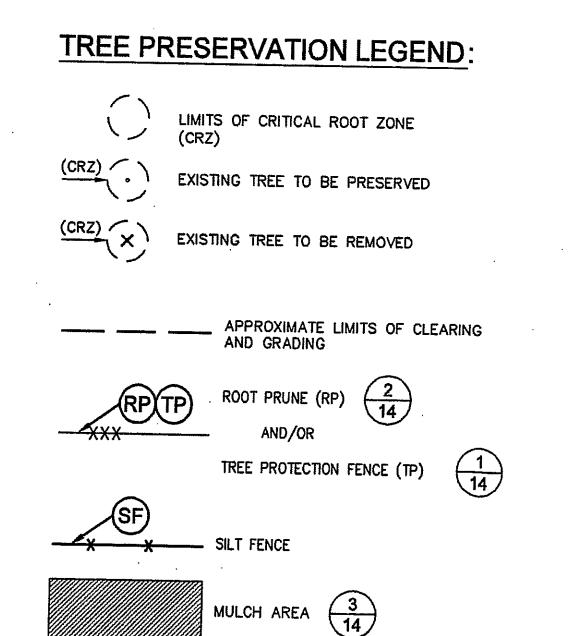
CO. NO.

CAD NAME: G8118SWM-OUTFALL

LAYOUT: OUTFALL 1
FILE NO. 08118-06







#### NOTE

- 1. THE LOCATION AND CONDITION ANALYSIS OF ALL OFFSITE TREES WERE ESTIMATED.
- 2. SEE SHEET 13 FOR TREE INVENTORY AND CONDITION ANALYSIS. SEE SHEET 14 FOR THE TREE PRESERVATION NARRATIVE. SEE SHEET 6 FOR TREE PRESERVATION TARGET AND STATEMENT (10—YEAR TREE CANOPY CALCULATIONS.)
- 3. SUITABLE EXISTING TREES MAY BE IDENTIFIED DURING THE SITE VISIT WITH THE URBAN FORESTOR FOR TRANSPLANTATION TO OTHER AREAS ON SITE PRIOR TO CONSTRUCTION ACTIVITIES.



**CERTIFIED ARBORIST** 

International
Society
of Arboriculture
CERTIFIED ARBORIST
Dennis Dale Dixon
Centicate Number: MA-4913A
Equivation Date: Dec-31, 2011

15' 0' 30' SCALE: 1"= 30' Application No RZ2010-PR-010 Staff KGS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED MARCH 24, 2011
Date of (BOS) (PC) March 29, 2011

PRESER

TREE

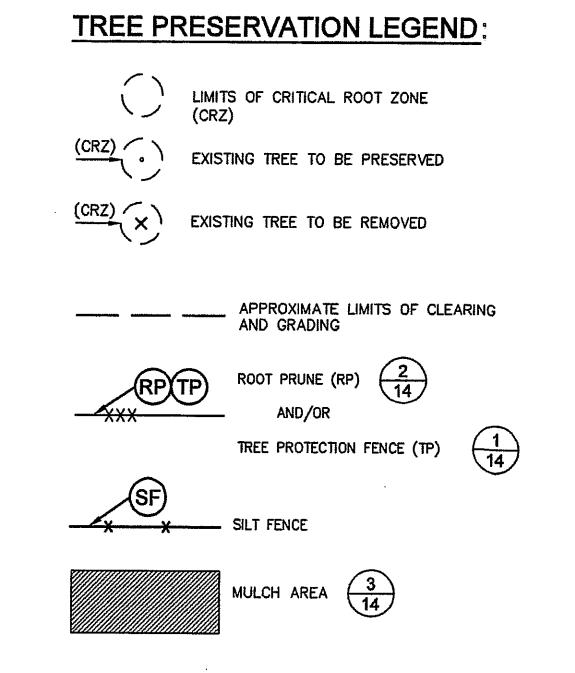
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	BC REVISIONS	REVISED: 10-14-10	REWSED: 11-12-10	12-2-10	12-21-10		APPLICANT: NEIGHBORHOODS VI. LLC	SUNSET HILLS	SUIT 200	RESTON, VA 20190
	DE	SIC	N	D	BY	; F	LR			
	DR	AF	TE	D	BY:	C	AD			
	СН	EC	KE	D	BY:	P	LR			
	DΑ	TE	اد :	UN	E :	20	10			
•	SC	ALI	<b>E</b> :		IOR. ERT			30'		
		SH	ΙE	ΞT	1	1	OF	18	3	
	CO	. N	10.			•				

CAD NAME: G8118TPP

FILE NO. 08118-06

LAYOUT:TREE PRESERVATION



#### NOTE

- 1. THE LOCATION AND CONDITION ANALYSIS OF ALL OFFSITE TREES WERE ESTIMATED.
- 2. SEE SHEET 13 FOR TREE INVENTORY AND CONDITION ANALYSIS. SEE SHEET 14 FOR TREE PRESERVATION NARRATIVE. SEE SHEET 6 FOR TREE PRESERVATION TARGET AND STATEMENT (10—YEAR TREE CANOPY CALCULATIONS.)
- 3. SUITABLE EXISTING TREES MAY BE IDENTIFIED DURING THE SITE VISIT WITH THE URBAN FORESTOR FOR TRANSPLANTATION TO OTHER AREAS ON SITE PRIOR TO CONSTRUCTION ACTIVITIES.



TREE 217 TREE 227

TREE 24

PRESERVATION TREE PRELIMINARY Application No RZ2010-PR-010 Staff KGS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED MARCH 24, 2011
Date of (BOS) (PC) March 29, 2011 DESIGNED BY: PLR DRAFTED BY: CAD CHECKED BY: PLR DATÉ; JUNE 2010 SCALE: HOR. 1"= 30" VERT. NA SHEET 12 OF 18 CO. NO. CAD NAME: G8118TPP

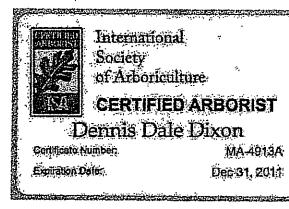
LAYOUT:TREE PRES (2)
FILE NO. 08118-06

62 SLAUGHTE.

DB 6646 PG 16 ZONE R-2

SQUARE

#### **CERTIFIED ARBORIST**



j					0/			REE INVENTORY AND CONDITION ANALY	'SIS							<b>→</b>
Tag#	Species	Size	*TRZ	Condition	Canopy Position	Crown	Average Crown Spread	Problems	Status			Acti	vities	5		Conjments
										rune		stat		ests	Kemove vines Cable	
		*DBH (in.)	R(ft.)	1%		%	ft					Cambistat	Prune	Treat Pests	Cable	
4	błack walnut mulberry	18 17	18					small deadwood large deadwood, branch decay, trunk decay, conflicting branches, multistem	preserve		x				+	Offsite
5	black walnut black walnut	12 17	12 17					large deadwood, thin crown. large deadwood, branch decay	preserve preserve	х	X	-	х			Offsite
8	ash black walnut	16 20	16 20	38	supressed	40	50		preserve preserve	_	X	-	X			Poor Condition (Offsite)
9	ash yellow-poplar	24, 12 26	30 26	28 31	co dominate	95 65	40 40		preserve preserve		x	-		4		Poor condition (Offsite) Poor Condition (Offsite)
12	red maple	32	32				45	weak co dominant union, large deadwood exposed roots, conflicting branches, small deadwood,	preserve	x	x					Offsite
13 14	ash swamp white oak	18 13	18 13				25 15	3 co dominate leads large deadwood, thin crown	preserve preserve		x x	_			_	Offsite Offsite On or near limits of clearing and
15	eastem white pine	13	13				20	small deadwood	TBD							grading. Final status to be evaluated in field with UFMD.
16 17	eastern white pine eastern white pine	14 12	14 12				20 20	exposed mots, small deadwood small deadwood, heavy vines	remove remove							
18	eastem white pine	14 41	41				20 65	small deadwood, heavy vines large deadwood, branch decay, heavy vines, 2 co dominate leads	remove preserve	,	×		x		×	
19	white oak	<del>-1</del> 1	-41					dominate reads	production	Â					<u> </u>	Near limits of clearing and grading. Final status to be
20 21	red maple white oak	16 21	16 21				30 25	exposed roots, large deadwood large deadwood, thin crown, root decay	TBD preserve	х	x					evaluated in field with UFMD.  Co-owned
22	white oak white oak	21 16	21 16				30 25	trunk decay, large deadwood, branch decay, one-sided large deadwood, one-sided	preserve preserve	x	x			-	-	Offsite Offsite
24	white oak	12	12				20	large deadwood	preserve		-					Offsite
25 26	white oak DEAD	42	42				40	large deadwood, branch decay, one-sided, heavy vines large deadwood, one-sided, trunk wound, wire fence	preserve preserve	×	X .		X		×	DEAD (Offsite)
27	white oak	28	28						preserve	X.	х	+	х		-	remove wire fence On or near limits of clearing and
28	yellow-popłar	40	40					large deadwood, broken limbs	TBD							grading. Final status to be evaluated in field with UFMD.
29 30	yellow-poplar yellow-poplar	18 17	18 17					small deadwood small deadwood thin crown, small deadwood	remove remove		1					
31 32 33	yellow-poplar pin oak yellow-poplar	16 17 28	16 17 28					large deadwood, heavy vines, one-sided small deadwood	preserve preserve	Х	×		х		×	
34	yellow-poplar	39	39					exposed roots, trunk wound, large deadwood large deadwood, branch decay, decline, 2 co dominate	preserve		x		×			
36 37	blackgum red maple	15 20	15 20					leads trunk wound, trunk decay, large deadwood, girdling roots, 4 co dominte leads	preserve		x	*	x			
38 39	yellow-poplar yellow-poplar	33 32	33 32					large deadwood	preserve preserve	х	х	_	X			
																On or near limits of clearing and grading. Final status to be
40	red maple	14	14				_	exposed roots, large deadwood girdling roots, trunk wound, large deadwood, wire fence				_				evaluated in field with UFMD.
41 42	ash silver maple	40 16	40 16					in trunk weak co dominant union, small deadwood	preserve preserve	X	×		X		×	remove wire fence Offsite Poor Condition. This tree has
																severe decay, is hazardous, and should be removed. It is
43	yellow-poplar	24	24	38	dominant	70	30	potential hazard, branch decay, trunk decay, large deadwood	preserve	x	x					offsite and cannot be removed. Offsite
44 45	silver maple yellow-poplar	14 38	14 38					exposed roots, small deadwood large deadwood weak co dominant union, large deadwood, branch	preserve preserve	×	X					Offsite
46	yellow-poplar	29	29					decay, 2 co dominate leads exposed roots, weak co dominant union, conflicting	preserve		×	_				Offsite
		1			1					1 1		- 1		1 1		
47	southern magnolia red maple	22 25	22 25					branches, small deadwood exposed roots, small deadwood	remove remove							NUMBER NOT USED
48 49 50	red maple NOT USED NOT USED	25						exposed roots, small deadwood large deadwood								NUMBER NOT USED NUMBER NOT USED
48 49 50 51 52 53	red maple NOT USED NOT USED northem red oak pin oak southem red oak	25 32 12 21	32 12 21					exposed roots, small deadwood  large deadwood  small deadwood  large deadwood	remove remove remove							
48 49 50 51 52 53 54 55	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar	25 32 12 21 26 27	32 12 21 26 27					exposed roots, small deadwood  large deadwood  small deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood	remove remove							
48 49 50 51 52 53 54	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar	25 32 12 21 26 27 22	25 32 12 21 26 27 22					exposed roots, small deadwood  large deadwood small deadwood large deadwood large deadwood large deadwood trunk wound, large deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover	remove remove remove remove remove remove remove		×				x	NUMBER NOT USED  Sever girdling roots with permission from UFMD.
48 49 50 51 52 53 54 55 56	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar	25 32 12 21 26 27 22	25 32 12 21 26 27 22 12	25 38	intermediate co dominant	1	12 18	exposed roots, small deadwood  large deadwood small deadwood large deadwood large deadwood large deadwood trunk wound, large deadwood, lean exposed roots, girdling roots, small deadwood, one-	remove remove remove remove remove						x	Sever girdling roots with permission from UFMD.  Poor Condition (Offsite)  Poor Condition
48 49 50 51 52 53 54 55 56	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry	25 32 12 21 26 27 22 12 10	25 32 12 21 26 27 22 12					large deadwood  large deadwood  small deadwood  large deadwood  large deadwood  large deadwood  tunk wound, large deadwood, lean  exposed roots, girdling roots, small deadwood, one- sided, vine cover  thin crown, stressed, excessive lean, vine cover	remove remove remove remove remove remove remove preserve preserve remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.
48 49 50 51 52 53 54 55 56 57 63 65	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple  yellow-poplar	25 32 12 21 26 27 22 12 10 12, 10, 8, 4	25 32 12 21 26 27 22 10 18	38	co dominant	70 55	25	large deadwood  large deadwood  small deadwood  large deadwood  large deadwood  large deadwood  large deadwood  trunk wound, large deadwood, lean  exposed roots, girdling roots, small deadwood, one- sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal	remove remove remove remove remove preserve preserve remove remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition Poor Condition. Very near property line. May need to contact neighbor. DEAD
48 49 50 51 52 53 54 55 56 57 63 65 66 67	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple  yellow-poplar DEAD  red maple	25 32 12 21 26 27 22 12 10 12, 10, 8, 4 21 28 18,18,16,12 12	25 32 12 21 26 27 22 10 18 21 33 12	38	co dominant	70	18	large deadwood  large deadwood  small deadwood  large deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood  trunk wound, large deadwood, lean  exposed roots, girdling roots, small deadwood, one- sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay  small deadwood	remove remove remove remove remove preserve preserve remove remove remove remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.
48 49 50 51 52 53 54 55 56 57 63 65	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple  yellow-poplar	25 32 12 21 26 27 22 12 10 12, 10, 8, 4 21 28 18,18,16,12 12	25 32 12 21 26 27 22 10 18	38	co dominant	70 55	25	large deadwood small deadwood small deadwood large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood trunk wound, large deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay	remove remove remove remove remove preserve preserve remove remove remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor. DEAD Poor Condition
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple  yellow-poplar DEAD  red maple yellow-poplar American sycamore	25 32 12 21 26 27 22 12 10 12, 10, 8, 4 21 28 18,18,16,12 12	25 32 12 21 26 27 22 10 18 21 33 12	38	co dominant	70 55	25	large deadwood  large deadwood  small deadwood  large deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood  trunk wound, large deadwood, lean  exposed roots, girdling roots, small deadwood, one- sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay  small deadwood	remove remove remove remove remove preserve preserve remove remove remove remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor. DEAD Poor Condition
48 49 50 51 52 53 54 55 56 57 63 65 66 67 70 71	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED	25  32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17	25 32 12 21 26 27 22 10 18 21 33 12 25 16 16	38 38 31	co dominant	70 55	18 25 40	large deadwood  large deadwood  large deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood, lean  exposed roots, girdling roots, small deadwood, one-sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay  small deadwood  small deadwood  exposed roots, small deadwood, top broken out  Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline,	remove remove remove remove remove remove preserve remove remove remove remove remove remove						X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor. DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.
48 49 50 51 52 53 54 55 56 67 63 65 66 67 70 71	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple yellow-poplar DEAD red maple yellow-poplar	25 32 12 21 26 27 22 10 12, 10, 8, 4 21 28 18,18,16,12 12 18,17	25 32 12 21 26 27 22 10 18 21 33 12 25 16	38	co dominant	70 55	25	large deadwood  large deadwood  large deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood, lean  exposed roots, girdling roots, small deadwood, one-sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay  small deadwood  small deadwood  exposed roots, small deadwood, top broken out Large deadwood, Thin crown	remove remove remove remove remove remove preserve remove remove remove remove remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor. DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition  Poor Condition  DEAD
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple  yellow-poplar DEAD  red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine	25 32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12	25 32 12 21 26 27 22 10 18 21 33 12 25 16 12	38 38 31 34	co dominant co dominant dominant intermediate	70 55 70 65	18 25 40	large deadwood small deadwood large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood targe deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay Large deadwood, Thin crown, Invasives present,	remove						x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor. DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition  DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED	25 32 12 21 26 27 22 12 10 12, 10, 8, 4 21 28 18,18,16,12 12 18,17	25 32 12 21 26 27 22 10 18 21 33 12 25 16 16	38 38 31	co dominant	70 55 70 65	18 25 40	large deadwood small deadwood large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay	remove	x					X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition.  Poor Condition  DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71 72 77 79 83	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple  yellow-poplar DEAD  red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine eastern white pine eastern white pine	25 32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12	25 32 12 21 26 27 22 10 18 21 21 21 12 12 12 12 12 12 12	38 38 31 34	co dominant co dominant dominant intermediate	70 55 70 65	18 25 40	large deadwood small deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood tunks weak crotch, Large deadwood, Basal decay small deadwood small deadwood tunks weak crotch, Large deadwood, Basal decay small deadwood tunks weak crotch, Large deadwood, Basal decay Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots	remove	x	x				X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED red maple eastem white pine eastem white pine eastem white pine castem white pine eastem white pine mockemut hickory red maple	25 32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 21	25 32 12 21 26 27 22 10 18 21 21 25 16 12 12 12 25	38 38 31 34	co dominant co dominant dominant intermediate	70 55 70 65	18 25 40	large deadwood small deadwood large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood  exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay	remove	x	×				X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition.  Poor Condition  DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite
48 49 50 51 52 53 54 55 56 57 63 65 66 67 70 71 72 77 79 83 84 86 87 88 89 90	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine DEAD red maple red maple red maple eastem white pine DEAD red maple red maple	25  32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 12 12 12 12 12 12	25 12 21 26 27 22 10 18 21 21 25 16 12 12 21 22 22	38 38 31 34	co dominant co dominant dominant intermediate	70 55 70 65	18 25 40	large deadwood small deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood tunks weak crotch, Large deadwood, Basal decay small deadwood small deadwood tunks weak crotch, Large deadwood, Basal decay small deadwood small deadwood tunks weak crotch, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal	remove	x	x				x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition  DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  DEAD (Offsite)
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine mockemut hickory red maple	25  32 12 21 26 27 22 12 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 11 12 12 11 12 12	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 12 12 12 12 13 14 15 16 17 18 18 18 19 10 10 10 10 10 10 10 10 10 10	38 38 31 34 38	co dominant co dominant dominant intermediate	70 55 70 65	18 25 40 10	large deadwood small deadwood large deadwood large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heavy vines, thin crown, one-sided severe decline, thin crown, trunk decay	remove	x	×				X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition  DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Offsite  Offsite
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine red maple pEAD red maple red maple pEAD red maple pEAD red maple red maple DEAD red maple	25  32 12 21 26 27 22  12 10 12, 10, 8, 4  21 28  18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 11 12 12 11 11	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 12 12 12 12 13 14 15 16 17 18 18 10 10 11 10 10 10 10 10 10 10	38 38 31 34 38	co dominant  dominant  intermediate  intermediate	70 55 70 65 50 45 35	18 25 40 10 10	exposed roots, small deadwood  large deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood, lean  exposed roots, girdling roots, small deadwood, one- sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay  small deadwood  small deadwood  exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots  Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heavy vines, thin crown, one-sided	remove	x	×				X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition  DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite
48 49 50 51 52 53 54 55 56 57 63 65 66 67 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine DEAD  red maple red maple red maple eastem white pine DEAD  red maple eastem white pine red maple yellow-poplar American sycamore NOT USED	25  32 12 21 26 27 22  12 10 112, 10, 8, 4  21 28  18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 11 22 11 22 11 22 12 1	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 10 18 11 22	38 38 31 34 38 38 28	co dominant  dominant  intermediate  intermediate  co dominant  dominant	70 55 70 65 50 45 35	18 25 40 10 10	large deadwood small deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover thirt crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood small deadwood exposed roots, small deadwood, top broken out Large deadwood, Thirt crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thirt crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heavy vines, thirt crown, one-sided severe decline, thirt crown, trunk decay	remove	x	×				x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact naighbor. DEAD Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition DEAD  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition
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48 49 50 51 52 53 54 55 56 57 63 65 66 67 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine mockemut hickory red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine pEAD red maple yellow-poplar black locust NOT USED  black locust NOT USED	25  32 12 21 26 27 22 12 10 112, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 11 22 11 22 16 17, 6 11 22 16 17, 6 11 17, 6 11 11 11 11 11 11 11 11 11 11 11 11 11	25 32 12 21 26 27 22 10 18 21 25 16 12 21 22 10 18 11 21 12 12 11 12 11 12 11 11	38 38 31 34 38 38 28	co dominant  dominant  intermediate  intermediate  co dominant  dominant	70 55 70 65 50 45 35	18 25 40 10 10	large deadwood small deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover thirt crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood small deadwood exposed roots, small deadwood, top broken out Large deadwood, Thirt crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thirt crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heavy vines, thirt crown, one-sided severe decline, thirt crown, trunk decay	remove	x	x x x x				X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor. DEAD Poor Condition  NUMBER NOT USED On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition DEAD Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD. Offsite Offsite Offsite DEAD (Offsite) Offsite Poor Condition
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95 100 105 106 106 107 108 109 109 109 109 109 109 109 109	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple  yellow-poplar DEAD  red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine mockemut hickory red maple pEAD red maple  red maple  ored maple pEAD  red maple DEAD  red maple pellow-poplar black locust NOT USED  black locust NOT USED  black locust NOT USED  DEAD silver maple mulberry arborvitae eastem white pine	25  32 12 21 26 27 22 10 112, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 11 22 10 17, 6 11 22 16 13 10 13 13 11 12	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 10 18 11 21 12 12 11 12 11 11 11 11	38 38 31 34 38 38 28 30	co dominant dominant intermediate intermediate co dominant dominant co dominant	70 55 70 65 50 45 35	18 25 40 10 10 15 15 10	exposed roots, small deadwood  large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood trunk wound, large deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thirr crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead  muitiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood  exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heaw vines, thin crown, one-sided severe decline, thin crown, one-sided severe decline, thin crown, trunk decay broken top, major branch decay, thin crown, excessive lean  Basal decay, Small deadwood Excessive lean, One-sided, Large deadwood, Trunk decay Excessive lean, One-sided, Large deadwood, Trunk	remove		x x x	x			x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact naighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition  Poor Condition  Poor Condition  Offsite  Offsite  Offsite  Commed. Dead tree should be removed but only with adjacent owner's permission  Offsite  Offsite
48 49 50 51 52 53 54 55 56 67 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95 95 97 99 100 105 106 108 109 109 109 109 109 109 109 109	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple  yellow-poplar DEAD  red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine mockemut hickory red maple  red maple  DEAD  red maple  pellow-poplar American sycamore NOT USED  DEAD  red maple  DEAD  red maple  red maple  DEAD  red maple  pellow-poplar black locust NOT USED  black locust NOT USED  DEAD  silver maple  mulberry arborvitae eastem white pine eastem white pine eastem white pine eastem white pine	25  32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 12 12 10 17, 6 11 22 16  13 10 13 13 12 10 12	25 32 12 21 26 27 22 10 18 21 21 22 12 12 25 16 12 21 22 10 11 12 12 12 12 11 12 11 12 11 11	38 38 31 34 38 38 28 30	co dominant  dominant  intermediate  intermediate  co dominant  dominant	70 55 70 65 50 45 35	18 25 40 10 10	exposed roots, small deadwood  large deadwood large deadwood large deadwood large deadwood large deadwood trunk wound, large deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood small deadwood small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Excessive lean, Large deadwood, Trunk decay, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heavy vines, thin crown, one-sided severe decline, thin crown, trunk decay broken top, major branch decay, thin crown, excessive lean  Basal decay, Small deadwood small deadwood small deadwood small deadwood Excessive lean, Physical Damage, Small deadwood small deadwood, vines thin crown, stressed, excessive lean small deadwood, vines	remove	x	x x x x x x x	x			x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition  Poor Condition  Poor Condition  Offsite  Offsite  Offsite  Ooffsite  Poor Condition  NUMBER NOT USED  Co-owned. Dead tree should be removed but only with adjacent owner's permission  Offsite
48 49 50 51 52 53 54 55 56 57 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95 95 100 105 106 108 108 108 109 109 109 109 109 109 109 109	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black cherry red maple  yellow-poplar DEAD  red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine eastem white pine mockemut hickory red maple  red maple  pEAD  red maple  pEAD  red maple  ored maple  red maple DEAD  red maple  red maple  DEAD  red maple  DEAD  red maple  red maple  pellow-poplar black locust NOT USED  black locust NOT USED  DEAD  silver maple  mulberry arborvitae eastem white pine eastem white pine eastem white pine	25  32 12 21 26 27 22 10 12, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 11 22 10 17, 6 11 22 16  13 10 13 13 13 12 10	25 32 12 21 26 27 22 10 18 33 12 25 16 12 12 21 12 21 12 21 12 12 11 12 11 11	38 38 31 34 38 38 28 30	co dominant dominant intermediate intermediate co dominant dominant co dominant	70 55 70 65 50 45 35	18 25 40 10 10 15 15 10	exposed roots, small deadwood  large deadwood large deadwood large deadwood, one-sided, vines small deadwood trunk wound, large deadwood, lean exposed roots, girdling roots, small deadwood, one-sided, vine cover thirt crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heaw vines, thir crown, one-sided severe decline, thin crown, trunk decay broken top, major branch decay, thin crown, excessive lean  Basal decay, Small deadwood Excessive lean, One-sided, Large deadwood, Trunk decay Excessive lean, One-sided, Large deadwood, Trunk decay Excessive lean, Physical Damage, Small deadwood small deadwood, vines thin crown, stressed, excessive lean	remove	x	x x x x x x x x x x x x x x x x x x x	x			X	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact naighbor. DEAD Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Ooffsite  Ooffsite  Oor Condition  Poor Condition  Poor Condition  Offsite  Offsite  Offsite  Offsite  Offsite  Ooffsite  Oor Condition  Poor Condition  Poor Condition  Poor Condition  Offsite  Offsite  Offsite  Offsite  Offsite  Offsite  Ooffsite  Ooffsite  Ooffsite
48 49 50 51 52 53 54 55 56 57 63 65 66 67 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95 100 105 106 108 109 110 111 112 113 114	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine mockemut hickory red maple yellow-poplar black locust NOT USED  black locust NOT USED  DEAD  red maple yellow-poplar black locust NOT USED  black locust NOT USED  DEAD silver maple eastem white pine eastem white pine eastem white pine red maple yellow-poplar black locust NOT USED	25  32 12 21 26 27 22 12 10 112, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 11 22 11 22 11 22 11 21 12 11 21 12 12	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 10 18 11 22 10 11 11 11 12 12 13 13 11 12 13 13 14 15 16 17 18 18 18 18 18 18 18 18 18 18	38 38 31 34 38 38 28 30	co dominant dominant intermediate intermediate co dominant dominant co dominant	70 55 70 65 50 45 35 30	18 25 40 10 10 15 15 10	large deadwood small deadwood large deadwood large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, glirdling roots, small deadwood, one-sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood small deadwood small deadwood, Trin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay, Earge deadwood, Multiple trunks heavy vines, thin crown, one-sided severe decline, thin crown, trunk decay broken top, major branch decay, thin crown, excessive lean Basal decay, Small deadwood Excessive lean, One-sided, Large deadwood, Trunk decay Excessive lean, Physical Damage, Small deadwood small deadwood, vines thin crown, stressed, excessive lean small deadwood, vines large deadwood, branch decay, vines exposed roots, small deadwood, vines large deadwood, branch decay, vines exposed roots, small deadwood, one-sided thin crown, large deadwood, one-sided	remove	x	x x x x x x x x x x x x x x x x x x x	X			x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact naighbor.  DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Offsite  Coffsite  Poor Condition  Poor Condition  Poor Condition  Offsite
48 49 50 51 52 53 54 55 56 67 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95 97 99 100 105 106 108 109 110 111 112 113	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine mockemut hickory red maple red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine mockemut hickory red maple DEAD  red maple yellow-poplar black locust NOT USED  black locust NOT USED  DEAD silver maple mulberry arborvitae eastem white pine eastem white pine red maple red maple red maple peastem white pine eastem white pine eastem white pine red maple red maple red maple	25  32 12 21 26 27 22  12 10 112, 10, 8, 4  21 28  18,18,16,12 12 18,17  16 12 12 12 12 12 12 11 22 16  17, 6 11 22 16  13 10 17, 6 11 22 11 12 12 11 12 12 11 12 12 11 12 12	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 10 18 11 22 10 10 11 11 11 12 12 12 13 13 13 13 13 13 13 13 13 13	38 38 31 34 38 38 28 30 25	co dominant dominant intermediate intermediate co dominant dominant co dominant	70 55 70 65 50 45 35 30	18 25 40 10 10 15 15 15 10	exposed roots, small deadwood  large deadwood  small deadwood  large deadwood  large deadwood  large deadwood, one-sided, vines  small deadwood  tunk wound, large deadwood, lean  exposed roots, girdling roots, small deadwood, one-sided, vine cover  thin crown, stressed, excessive lean, vine cover  small deadwood  basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay  small deadwood  small deadwood  exposed roots, small deadwood, top broken out  Large deadwood, Thin crown  Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Basal decay, Exposed roots  Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay  Trunk decay, Basal decay, Large deadwood, Multiple trunks  heavy vines, thin crown, one-sided severe decline, thin crown, trunk decay  broken top, major branch decay, thin crown, excessive lean  small deadwood, vines  thin crown, stressed, excessive lean  small deadwood, vines  thin crown, stressed, excessive lean  small deadwood, vines  large deadwood, branch decay, vines exposed roots, small deadwood, vines  small deadwood, vines  large deadwood, branch decay, vines exposed roots, small deadwood, vines  small deadwood, vines  large deadwood, branch decay, decline	remove	x x x x x x x	x x x x x x x x x x x x x x x x x x x	x	X		x	Sever girdling roots with permission from UFMD. Poor Condition (Offsite) Poor Condition. Very near property line. May need to contact neighbor.  DEAD Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition  Poor Condition  Poor Condition  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition  Poor Condition  Poor Condition  Poor Condition  Poor Condition  Offsite  Offsite
48 49 50 51 52 53 54 55 56 67 63 65 66 67 68 69 70 71 72 77 79 83 84 86 87 88 89 90 91 92 93 94 95 100 105 108 109 110 111 112 113 114 115	red maple NOT USED NOT USED northem red oak pin oak southem red oak yellow-poplar yellow-poplar yellow-poplar eastem white pine black chemy red maple yellow-poplar DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine DEAD red maple yellow-poplar American sycamore NOT USED  red maple eastem white pine mockemut hickory red maple yellow-poplar black locust NOT USED  black locust NOT USED  black locust NOT USED  DEAD silver maple mulbery arborvitae eastem white pine eastem white pine red maple peastem white pine red maple peastem white pine eastem white pine red maple	25  32 12 21 26 27 22 12 10 112, 10, 8, 4  21 28 18,18,16,12 12 18,17  16 12 12 12 12 12 12 11 22 11 22 11 21 12 11 21 12 12	25 32 12 21 26 27 22 10 18 21 21 25 16 12 21 22 10 18 11 22 10 10 11 11 12 12 12 13 13 13 14 15 16 16 16 16 16 16 16 16 16 16	38 38 31 34 38 38 28 30 25	co dominant dominant intermediate intermediate co dominant dominant co dominant	70 55 70 65 50 45 35 30	18 25 40 10 10 15 15 15 10	exposed roots, small deadwood  large deadwood large deadwood large deadwood large deadwood, one-sided, vines small deadwood large deadwood, one-sided, vines small deadwood, lean exposed roots, girdling roots, small deadwood, one- sided, vine cover thin crown, stressed, excessive lean, vine cover small deadwood basal decay, large deadwood, decline, two codominate leads, one dead  multiple trunks, Weak crotch, Large deadwood, Basal decay small deadwood small deadwood small deadwood small deadwood  exposed roots, small deadwood, top broken out Large deadwood, Thin crown Invasives present, Large deadwood, Moderate decline, Major branch decay  Large deadwood, Thin crown, Invasives present, Moderate decline Large deadwood, Basal decay, Exposed roots  Multiple trunks, Weak crotch, Large deadwood, Basal decay, exposed roots  Excessive lean, Large deadwood, Trunk decay, Basal decay Trunk decay, Basal decay, Large deadwood, Multiple trunks heavy vines, thin crown, one-sided severe decline, thin crown, one-sided severe decline, thin crown, trunk decay  broken top, major branch decay, thin crown, excessive lean  Basal decay, Small deadwood Excessive lean, One-sided, Large deadwood, Trunk decay Excessive lean, Cone-sided, Large deadwood, Trunk decay Excessive lean, Cone-sided, Large deadwood, Trunk severe decline, thin crown, trunk decay  Excessive lean, Cone-sided, Large deadwood, Trunk decay Excessive lean, Small deadwood, vines thin crown, stressed, excessive lean small deadwood, vines large deadwood, vines large deadwood, vines small deadwood, vines	remove	x	x x x x x x x x x x x x x x x x x x x	x	X		X	Sever girdling roots with permission from UFMD. Poor Condition. Very near property line. May need to contact naighbor. DEAD  Poor Condition  NUMBER NOT USED  On or near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition  Poor Condition. Near limits of clearing and grading. Final status to be evaluated in field with UFMD.  Offsite  Offsite  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition  Poor Condition  Poor Condition  Poor Condition  Offsite  Offsite  Offsite  Offsite  Offsite  Poor Condition  Poor Condition  Poor Condition  Poor Condition  Poor Condition  Offsite

C = Crown cleaning by pruning dead, diseased, detached, and broken branches 2 inches in diameter and larger as close to the point of origin possible without cutting into branch collar tissue.

\*DBH = Diameter at Breast Height (measured 4.5 feet above ground).

\*TRZ = Typical Root Zone (1 foot of radius per inch of tree diameter).

TBD = Final status to be determined in field in consultation with UFMD. **CERTIFIED ARBORIST** RWP = Remove with permission from UFMD. Tree is within undisturbed area but its condition warrants its removal.

\*Condition ratings provided as percentages based on methods outlined in the latest edition of the Guide for Plant Appraisal, published by the International Society of Arboriculture

International
Society
of Arboriculture
CERTIFIED ARBORIST Dennis Dale Dixon

Certificate Number:

Expiration Date:

Dec 31, 2011

Zimar & Associates, Inc. ARBORICULTURE FORESTRY CONSULTING 10105 Residency Road, Suite 207 Manassas, Virgina 20110 Tel (703) 331-3731 Fax (703) 331-1359

1. ORIGINAL TREE INVENTORY AND CONDITION ANALYSIS DONE BY ZIMAR AND ASSOCIATES, INC. IN SEPTEMBER 2007 AND UPDATED AND FIELD VERIFIED BY DENNIS DIXON, CA IN

SEE SHEET 6 FOR TREE PRESERVATION TARGET AND STATEMENT (10-YEAR TREE CANOPY CALCULATIONS).

25A	-il-or monto		R(ft.)	%		%	n	small deadwood, slight rot at base, branch decay	preserve	Roat	Mulc	Ferti	Cam	Pr	l rea	Ren Nec	<u>a</u>	Offsite
125	silver maple arborvitae	10 8	8	25	supressed	50	8	large deadwood, very thin, rot at base, slight lean	preserve		х			х	1	1		Poor Condition
126	arborvitae	6, 8, 2	12					large deadwood, one sided, leaning, conflicting branches	preserve	х	x	×		х				
127	arborvitae	10, 6	14	34	supressed	40	12	leaning	preserve	х		x	7	1	_		-	Poor Condition
28	maple	10	10	28	supressed	45	15	leaning, one sided, potential hazard, thin crown	preserve								1	oor Condition, Potential Hazar (Offsite)
20	block aborns	6 6 10	10	28	supressed	45	25	possible 2 trees, leaning over house, thin crown, trunk decay, conflicting branches	preserve		x							Poor Condition (Offsite)
29   29A	black cherry ash	6, 6, 10 10	10	20	supressed	40		decay	preserve						1	1		Offsite
30 30A	arborvitae maple	10 10	10 10	19	suppressed	30	10	very thin crown, large deadwood, almost dead	preserve preserve		×	×	-		+	-	+	Poor Condition  Co-Owned
31	mulberry	10	10	16	suppressed	10	12	almost dead, excessive lean, potential hazard	preserve	×	х							Poor Condition (Offsite)
32	arborvitae	12, 4	12	28	suppressed	80	25	exposed roots, conflicting branches, small deadwood, one sided	preserve	х	х	x		х				Poor Condition
32A	linden	16	16					long/extending branches, exposed roots, slight lean	preserve									Offsite
33	hemlock	10	10					thin at bottom, small deadwood, one sided, in decline potential hazard, leaning, growing over sidewalk/into	remove			$\dashv$			+			
34	arborvitae	20	15	19	co dominant	90	12	overhead wires, ivy cover, brown/thin at bottom	remove			-		_	+	-	P	oor Condition, Potential Hazar
35	holly	12	12	19	supressed	.50	8	crowded and one sided, leaning into sidewalk, potential hazard, lvy cover, soon to die	remove				$\Box$		_		Р	oor Condition, Potential Hazar
36	arborvitae	40	15	28	co dominant	80	12	ivy browning/die back at crown, crowded, thinning interior,	remove		_			-		-	-	Poor Condition
37	hemlock	12	12	34	co dominant	60	15	ivy, large deadwood, growing into sidewalk	remove				_	$\perp$			_	Poor Conditon
38 39	holly holly	10 20	10 15	<u>.</u>				thin at bottom  multistem, thin/one sided at bottom	remove						+	-	-	
39A	dogwood	18	12				_	multistem (6), thin crown, large deadwood at bottom	remove				$\dashv$					
40	spruce holly	8 6, 6, 12, 10	8 20					one sided, browning/dieback at bottom base	remove	_			1	-				
			40	-				multistem (8), trunk decay, supressed growth (lean), one sided	remove									
42	dogwood dogwood	12 14	12 14					multistem (4), some ivy, fungus	remove						$\perp$			
44	pine	10	10					fungus	remove					_	-	_	+	
45	pine	8	8	25	suppressed	50	15	ivy cover, top broken out, browning/thinning needles, fungus, small deadwood	remove									Poor Condition
46	pine	18	18					browning/thinning needles, large deadwood, ivy cover slight lean, co dominate stems, small deadwood	remove		$\prod$						+	
47 48	silver maple silver maple	18 18	18 18					slight lean, co dominate stems, small deadwood slight lean, fungus, one sided, exposed roots	remove									
			10	20	co demisses	90	20	co dominate union, large deadwood, fungus, erosion, exposed roots	remove				Ī					Poor Condition
49	mimosa	12	12	28	co dominant	<i>3</i> U	20	small deadwood, co dominate stems, some trunk	.5111046		-		$\dashv$				1	
50	bìrch	12	12					decay, exposed roots	remove				-	-	+	+	+	
51	birch	12	12					small deadwood, co dominate stems, some trunk decay, exposed roots	remove						_			N. 442
52 53	NOT USED												-	-	+		_	NUMBER NOT USED
53 54	DEAD	30							remove						#			DEAD
55 56	silver maple DEAD	12 -8	12					thin crown, conflicting branches	remove		$\vdash$				+	+	+	DEAD
57	silver maple .	14	14				· · · -	thin crown	remove					_	1			
58 59	DEAD silver maple	14 8	8					top of bank, exposed roots, thin crown	remove				-	$\dashv$	$\dashv$	+		DEAD
60	silver maple	16	16					top of bank, exposed roots, thin crown	remove					_	_			
61	sassafras	8	В					potential hazard, leaning over road at top of bank, vine cover, deadwood, one sided	remove									Potential Hazard
			40	0.5		20	20	crown missing, deadwood, potential hazard, leaning	ramova									oor Condition, Potential Hazar
62	silver maple black walnut	10 12	10 12	25	co dominant	30	20	over road at top of bank thin crown, leaning	remove							+	1	Ool Collotton, Fotential Flazar
64	DEAD	10, 10, 10	20					thin crown, leaning, ity cover	remove	_			$\dashv$		_	4	-	DEAD (one stem down)
65	silver maple	8	8					potential hazard, leaning over road at top of bank,										
66	silver maple	8	_8_	22	co dominant	75	20	exposed roots/erosion, one sided, conflicting branches potential hazard, leaning over road at top of bank,	remove					-	+	+	P	oor Condition, Potential Hazar
67	black cherry	14	14	28	co dominant	50	20	potential nazaro, leaning over road at top of bank, deadwood, fungus	remove					_		$\downarrow$	P	oor Condition, Potential Hazar
60	silver maple	10	10					slight lean, conflicting branches, multiple co dominate stems	remove									
68 68A	black walnut	12	12					slightly one sided, top of bank	remove						1			
169	black locust	8	8	38	co dominant	80	25	slight lean, thin branching at bottom, deadwood, branch decay	remove						-	ł		Poor Condition
70	yellow-poplar	12	12		GO GOTTILIZATE				remove									
71	yellow-poplar	12	12_					some rot at base co dominate upper stems, lower stem dead,deadwood	remove					$\dashv$			+	
72	black locust	24	24	22	co dominant	70	15	truck/branch decay	remove					_		$\perp$	$\perp$	Poor Condition
173	sassafras	10	10					potential hazard, leaning over road at top of bank, exposed roots, erosion	remove									Potential Hazard
								potential hazard, leaning over road at top of bank,										
74	błack locust	28	28	28	co dominant	80	25	exposed roots/erosion, some deadwood, heavy vine cover	remove								F	Poor Condition, Potential Hazar
75	black walnut	12	12						remove	_				_	_	_		Offsite in R.O,W.
76   77	silver maple black cherry	10 8	10 8						remove					$\exists$				Offsite in R.O.W.
78	red maple	24	24					heavy vine cover	preserve remove	×	×		_		-	$\dashv$	+	Offsite
80	NOT USED	8	8					vine cover							1			NUMBER NOT USED
81	DEAD	8							RWP		$\vdash \vdash$	$\Box$			-	1		DEAD DEAD
83	DEAD red maple	8	8						preserve		х						$\perp$	JURU
84	yellow-poplar	24	24					exposed roots, erosion, some rot at base	preserve	х	х	$\coprod$			_		_	
85	yellow-poplar	36	36					co dominate stems, exposed roots, erosion, some rot at base	preserve	x	x					$\perp$		
86	yellow-poplar	12	12					exposed roots, erosion	preserve	1				-	_			
88	yellow-poplar yellow-poplar	18 10	18 10					co dominate stems, vine cover, conflicting branches	preserve	+	х		_	х				
																		Poor Condition. On or near the
ł i																		limits of clearing and grading. Final status to be evaluated in
		۱ ۵	8	38	co dominant	80	15	slight lean, vine cover, co dominate stems exposed roots, erosion, one main stem dead, vine	TBD	_								field with UFMD.
89	yellow-poplar	8		28	co dominant	55	20	cover, trunk decay	preserve	-					_		_	Poor Condition (Offsite)
	yellow-poplar red maple	10	10		1			on stream bank, vine cover co dominate stems, small deadwood	preserve	-	х				_	_		Offsite Offsite
90	red maple oak		10 10 18				-	,		Π	Π	П			一			
90 91 92	red maple oak oak	10 20 36	10 18			_	_	major crown damage, trunk decay, exposed roots,						1	ı			Door Condition
190 191 192	red maple oak	10 20 36 8	10 18 8	22	co dominant	55	20	major crown damage, trunk decay, exposed roots, erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion	preserve		x					x		Poor Condition
190 191 192	red maple oak oak red maple	10 20 36	10 18 8	22	co dominant	55	20	erosion, top of stream bank	<u> </u>		x					x		On or near the limits of clearin
190 191 192 193	red maple oak oak red maple	10 20 36 8	10 18 8	22	co dominant	55	20	erosion, top of stream bank	<u> </u>		х					x		On or near the limits of clearin
190 191 192 193	red maple oak oak red maple red maple	10 20 36 8 8, 8, 10, 10	10 18 8 24	22	co dominant	55	20	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion	preserve		x					x		On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD. On or near the limits of clearin
190 191 192 193 194	red maple oak oak red maple red maple	10 20 36 8 8, 8, 10, 10	10 18 8 24	22	co dominant	55	20	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion	preserve		x					x		On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.
190 191 192 193 194	red maple oak oak red maple red maple easterm white pine	10 20 36 8 8, 8, 10, 10	10 18 8 24 12	22	co dominant	55	20	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion thin at bottom, some vine cover thin at bottom, some vine cover girdling/exposed roots, thinning crown, broken	TBD	x	x					x		On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD. On or near the limits of clearin and grading. Final status to b
190 191 192 193 194 195	red maple oak oak red maple red maple easterm white pine	10 20 36 8 8, 8, 10, 10	10 18 8 24	22	co dominant	55	20	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion thin at bottom, some vine cover thin at bottom, some vine cover	preserve	x	x					X		On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD. On or near the limits of clearin and grading. Final status to b
190 191 192 193 194 195 196	red maple oak oak red maple red maple easterm white pine easterm white pine red maple red maple	10 20 36 8 8, 8, 10, 10	10 18 8 24 12 12 14 10	22	co dominant	55	20	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown broken branches, large deadwood, heavy vine cover,	TBD TBD remove	X								On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD. On or near the limits of clearin and grading. Final status to b
190 191 192 193 194 195 196 197 198	red maple oak oak red maple red maple easterm white pine easterm white pine	10 20 36 8 8, 8, 10, 10	10 18 8 24 12 12	22	co dominant		20	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown	TBD TBD remove remove	x	x	x		x		x		On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD. On or near the limits of clearin and grading. Final status to b
190 191 192 193 194 195 196 197 198 199 200	red maple oak oak red maple red maple easterm white pine red maple red maple red maple red maple red maple	10 20 36 8 8, 8, 10, 10 12 12 14 10 10 8 6	10 18 8 24 12 12 14 10 10 8					erosion, top of stream bank  edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover  girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown broken branches, large deadwood, heavy vine cover, some rot at base exposed roots on stream bank, vine cover, deadwood	TBD TBD remove remove preserve	x	x	x		x				On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  Poor Condition (Offsite)  DEAD
190 191 192 193 194 195 196 197 198 199 200 201 202	red maple oak oak red maple red maple easterm white pine red maple red maple red maple red maple	10 20 36 8 8, 8, 10, 10 12 12 14 10 10 8	10 18 8 24 12 12 14 10					erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover  girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown broken branches, large deadwood, heavy vine cover, some rot at base	TBD  TBD  remove remove preserve	x	x	x		x				On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  Poor Condition (Offsite)
190 191 192 193 194 195 196 197 198 199 200 201 202	red maple oak oak red maple red maple easterm white pine easterm white pine red maple red maple easterm white pine black cherry DEAD red maple	10 20 36 8 8, 8, 10, 10 12 12 14 10 10 8 6	10 18 8 24 12 12 14 10 8 8					erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover  girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown broken branches, large deadwood, heavy vine cover, some rot at base exposed roots on stream bank, vine cover, deadwood  Girdling roots, embedded guy wire vine cover, deadwood in decline, thinning at bottom, co dominate stems,	TBD  TBD  remove remove preserve preserve RWP preserve	x	x	x		x				On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  Poor Condition (Offsite)  DEAD  remove guy wire
196 197 198 199 200 201 202 203	red maple oak oak red maple red maple red maple easterm white pine red maple red maple red maple red maple red maple asterm white pine black cherry DEAD red maple ash	10 20 36 8 8, 8, 10, 10 12 12 14 10 10 8 6 8 24	10 18 8 24 12 12 14 10 8 8 24	28	intermediate	15		erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover  girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown broken branches, large deadwood, heavy vine cover, some rot at base exposed roots on stream bank, vine cover, deadwood  Girdling roots, embedded guy wire vine cover, deadwood	TBD  TBD  remove remove preserve preserve RWP preserve	X	x	x		×				On or near the limits of clearing and grading. Final status to be evaluated in field with UFMD.  On or near the limits of clearing and grading. Final status to be evaluated in field with UFMD.  Poor Condition (Offsite)  DEAD  remove guy wire
190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 DBH = D	red maple oak oak red maple red maple easterm white pine easterm white pine red maple red maple red maple red maple red maple red maple asterm white pine black cherry DEAD red maple ast	10 20 36 8 8 8, 8, 10, 10 12 12 14 10 10 8 6 8 24 12 (measured 4.5 of radius per in	10 18 8 24 12 12 14 10 10 8 8 24 12 feet aboth of tree	28 34 ove ground), se diameter).	intermediate	15	60	erosion, top of stream bank edge of stream, vine cover, exposed roots, erosion  thin at bottom, some vine cover  thin at bottom, some vine cover  girdling/exposed roots, thinning crown, broken branches, some rot at base girdling roots, some rot at base, thinning crown broken branches, large deadwood, heavy vine cover, some rot at base exposed roots on stream bank, vine cover, deadwood  Girdling roots, embedded guy wire vine cover, deadwood in decline, thinning at bottom, co dominate stems, large deadwood, exposed roots, conflicting branches,	TBD  TBD  remove remove preserve RWP preserve	X	x							On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  On or near the limits of clearin and grading. Final status to b evaluated in field with UFMD.  Poor Condition (Offsite)  DEAD  remove guy wire  Offsite

ANALYSIS CONDITION

Application No RZ2010-PR-010 Staff KGS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED MARCH 24, 2011
Date of BOS) (PC) March 29, 2011

AND

INVENTORY

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	BC REVISIONS	REVISED: 10-14-10	REVISED: 11-12-10	12-2-10	12-21-10		APPLICANT: NEIGHBORHOODS VI, LLC	11111 SUNSET HILLS ROAD	SULL 200 RESTON, VA 20190
	D	ESI	GNI	D	B`	Y: F	PLR		
	D	RAI	FTE	Þ.	BY	· (	CAD		
	D	HEC	CKE	D	BY	': F	PLR		

DATE: JUNE 2010 SCALE: HOR. 1"= 40' VERT. 1" = 4' SHEËT 13 OF 18

CO. NO. CAD NAME: G8118TPP LAYOUT TREE INV & COND

FILE NO. 08118-06

#### TREE PRESERVATION NARRATIVE

- 1. ALL WORK PERFORMED IN ASSOCIATION WITH THIS PLAN SHALL MEET OR EXCEED CURRENT INDUSTRY STANDARDS AS PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), OR THE TREE CARE INDUSTRY ASSOCIATION (TCIA). IN THE EVENT TREATMENTS PRESCRIBED ARE NOT COVERED BY AN EXISTING STANDARD, WORK SHALL MEET OR EXCEED STANDARDS APPROVED BY FAIRFAX COUNTY'S URBAN FOREST MANAGEMENT DIVISION (UFMD).
- 2. THE URBAN FOREST MANAGEMENT DIVISION (UFMD) MAY REQUIRE THE APPLICANT TO RETAIN A CERTIFIED ARBORIST ("ARBORIST") TO ENSURE THE PROPER IMPLEMENTATION OF THE TREE PRESERVATION PLAN ("THIS PLAN"). IF REQUIRED, ALL WORK AS SPECIFIED BY THIS PLAN SHALL BE MONITORED BY THE ARBORIST TO ENSURE THAT ALL ACTIVITIES ARE CONDUCTED IN ACCORDANCE WITH THIS PLAN, ANY APPLICABLE DEVELOPMENT CONDITIONS AND/OR AS APPROVED BY UFMD MONITORING SHALL OCCUR AS SPECIFIED IN THE SITE MONITORING SCHEDULE DURING THE INSTALLATION OF TREE PROTECTION FENCING, DURING CLEARING OR GRADING ACTIVITIES INCLUDING THE REMOVAL OF TREES, VEGETATION, OR STRUCTURES, DURING THE TRANSPLANTING OF TREES OR VEGETATION AND/OR DURING OTHER SIMILAR ACTIVITIES ON THE SITE WITHIN 25 FEET OF THE LIMITS OF CLEARING AND GRADING.
- 3. PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES ON THE SITE, ALL INDIVIDUAL TREES AND GROUPS OF TREES SHOWN TO BE PRESERVED ON THIS PLAN SHALL BE PROTECTED BY FENCING WHERE SPECIFIED ON THIS PLAN. THE INSTALLATION OF THE PROTECTIVE FENCE SHALL BE MONITORIED AS SPECIFIED IN THE SITE MONITORING SCHEDULE. THE FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL DEMOLITION AND CONSTRUCTION PERSONNEL. THE FENCING SHALL BE INSTALLED PRIOR TO ANY DEMOLITION OR CONSTRUCTION WORK BEING CONDUCTED ON THE SITE. THE ARBORIST, IF REQUIRED, SHALL VERIFY THAT THE FENCING HAS BEEN INSTALLED IN ACCORDANCE WITH THE STANDARDS SET FORTH BY THIS PLAN.
- 4. AN URBAN FORESTER FROM UFMD AND, IF REQUIRED. THE ARBORIST SHALL WALK THE LIMITS OF CLEARING AND GRADING AS SPECIFIED IN THE SITE MONITORING SCHEDULE. MINOR ADJUSTMENTS TO THE LIMITS OF CLEARING AND GRADING MAY BE MADE WHERE APPROPRIATE AND DOCUMENTED FOR FUTURE REFERENCE, ADJUSTMENTS TO THE LIMITS OF CLEARING AND GRADING MAY INCLUDE THE REMOVAL OF TREES WITHIN THE UNDISTURBED AREAS THAT THE URBAN FORESTOR HAS IDENTIFIED AS DEAD OR DYING, IN POOR CONDITION OR POTENTIALLY HAZARDOUS. TREES IDENTIFIED TO BE REMOVED SHALL BE TAGGED IN THE FIELD. THESE TREES MAY BE REMOVED AS PART OF THE CLEARING OPERATION AS DIRECTED BY THE URBAN FORESTER. ANY TREE IDENTIFIED FOR REMOVAL SHALL BE REMOVED USING A CHAIN SAW. REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE USING A STUMP GRINDING MACHINE IN A MANNER CAUSING AS LITTLE DISTURBANCE AS POSSIBLE TO THE ADJACENT TREES AND ASSOCIATED UNDERSTORY VEGETATION AND SOIL CONDITIONS.
- 5. ALL TREE PRESERVATION RELATED WORK OCCURRING IN OR ADJACENT TO TREE PRESERVATION AREAS SHALL BE ACCOMPLISHED IN A MANNER THAT MINIMIZES DAMAGE TO VEGETATION TO BE PRESERVED, INCLUDING ANY WOODY AND/OR HERBACEOUS VEGETATION OCCURRING IN THE UNDERSTORY. TREES DESIGNATED FOR REMOVAL ALONG THE LIMITS OF CLEARING AND GRADING SHALL BE REMOVED USING A CHAINSAW SO AS TO AVOID DAMAGE TO SURROUNDING TREES AND UNDERSTORY VEGETATION TO BE PRESERVED. THE USE OF POWER EQUIPMENT IN THESE AREAS SHALL BE LIMITED TO SMALL HAND HELD AND OPERATED EQUIPMENT. ANY WORK THAT REQUIRES THE USE OF LARGER MOTORIZED EQUIPMENT SUCH AS, BUT NOT LIMITED TO, TREE TRANSPLANTING SPADES, SKID LOADERS, TRACTORS, OR ANY ACCESSORY OR ATTACHMENT CONNECTED TO SUCH EQUIPMENT SHALL NOT OCCUR UNLESS APPROVED BY UFMD.
- 6. AS PART OF THE IMPLEMENTATION OF THIS PLAN AND THE SITE PLAN, MANAGEMENT PRACTICES SHALL PROVIDE FOR THE PROTECTION OF UNDERSTORY PLANT MATERIALS, LEAF LITTER AND SOIL CONDITIONS FOUND IN AREAS TO BE LEFT UNDISTURBED. THE APPLICANT SHALL MONITOR THE SITE AS SPECIFIED TO ENSURE THAT INAPPROPRIATE ACTIVITIES SUCH AS THE STORAGE OF CONSTRUCTION MATERIALS, DUMPING OF CONSTRUCTION DEBRIS, AND TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL DO NOT OCCUR WITHIN THESE AREAS. THE UNDERSTORY PLANT MATERIALS, LEAF LITTER AND SOIL CONDITIONS SHALL BE RESTORED BY THE APPLICANT TO THE SATISFACTION OF UFMD IF THESE ARE FOUND TO BE DAMAGED, REMOVED OR ALTERED IN A MANNER NOT ALLOWED IN BY UFMD.
- 7. PRIOR TO THE SITE PRE-CONSTRUCTION MEETING IN THE FIELD, THE APPLICANT SHALL HAVE THE LIMITS OF CLEARING AND GRADING MARKED WITH FLAGGING AND/OR STAKED AS MAY BE APPROPRIATE TO CLEARLY IDENTIFY THE LIMITS.
- 8. AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRADING, OR DEMOLITION ACTIVITIES AND PRIOR TO THE INSTALLATION OF TREE THE PROTECTION FENCING, UFMD WILL BE GIVEN THE OPPORTUNITY TO INSPECT THE SITE TO VERIFY THAT ALL INDIVIDUAL TREES TO BE PRESERVED AND ALL AREAS TO BE LEFT UNDISTURBED HAVE BEEN CORRECTLY DELINEATED. UFMD SHALL PROVIDE WRITTEN NOTICE TO THE APPLICANT AS TO WHETHER OR NOT THE AREAS HAVE BEEN DELINEATED CORRECTLY. IF IT IS DETERMINED BY UFMD THAT THE AREAS ARE NOT DELINEATED CORRECTLY, NO GRADING OR CONSTRUCTION ACTIVITIES SHALL OCCUR ON THE SUBJECT PROPERTY UNTIL THE DELINEATION IS CORRECTED AND VERIFIED BY THE UFMD.
- 9. ROOT PRUNING: ROOT PRUNING SHALL BE PERFORMED WHEREVER GRADES WILL BE ALTERED WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED AND SHALL BE CONDUCTED WHERE SHOWN ON THE PLAN OR AS MOST PRACTICAL GIVEN SITE CONSTRAINTS. A VIBRATING PLOW, TRENCHER, STUMP CUTTER OR ARBORIST APPROVED EQUAL SHALL BE USED TO A DEPTH OF 18 INCHES. IF A TRENCHER IS USED THE TRENCH SHALL BE BACKFILLED IMMEDIATELY TO PREVENT ROOT DEHYDRATION. IF SILT FENCE IS TO BE INSTALLED AT THE LIMITS, THE ROOT PRUNING TRENCH MAY BE USED FOR THE INSTALLATION OF SILT FENCE. WHEREVER POSSIBLE, ROOT PRUNING TRENCHES SHOULD BE MULCHED WITH WOOD CHIPS OR MULCH FOUR INCHES DEEP.
- 10. WOOD CHIPS OR MULCH: WOOD CHIPS OR LEAF AND BRANCH MULCH SHALL BE PLACED AROUND THE LIMITS OF CLEARING AND GRADING IN AREAS WHERE TREES ARE WITHIN 10' OF THE LIMITS OF CLEARING AND GRADING AS SHOWN ON THIS PLAN. CHIPS OR MULCH THAT ARE PRODUCED AS A RESULT OF CLEARING OPERATIONS ON-SITE MAY BE USED FOR THIS PURPOSE. CHIPS OR MULCH SHALL BE PLACED BY HAND WITHOUT THE USE OF ENGINE-DRIVEN MACHINERY. CHIPS OR MULCH ARE NOT TO BE PLACED MORE THAN TEN FEET BEYOND THE LIMITS OF CLEARING AND GRADING AND AT A DEPTH OF NO MORE THAN FOUR INCHES WITHIN THE PRESERVATION AREAS. OUTSIDE THE PRESERVATION AREAS, (WITHIN THE DISTURBED AREA), CHIPS OR LEAF AND BRANCH MULCH MAY BE PLACED AT A DEPTH NOT TO EXCEED TEN INCHES

SITE MONITORING SCHEDULE								
LIST OF DUTIES	DATE	DESCRIPTION OF DUTIES						
PRE-CONSTRUCTION MEETING IN FIELD	SPECIFIED BY UFMD	A PRE-CONSTRUCTION MEETING WILL BE CONDUCTED IN THE FIELD BEFORE ANY CLEARING, GRADING OR DEMOLITION ACTIVITIES HAVE OCCURED. AN URBAN FORESTER FROM THE URBAN FOREST MANAGEMENT DIVISION (UFMD) SHALL WALK THE LIMITS OF CLEARING AND GRADING WITH THE APPLICANT'S CERTIFIED ARBORIST (IF REQUIRED): TO DETERMINE WHERE ADJUSTMENTS TO THE CLEARING LIMITS MAY BE MADE TO INCREASE THE SURVIVABILITY OF TREES TO BE PRESERVED THAT OCCUR ALONG THE CLEARING LIMITS. ADDITIONAL TREES WITHIN THE PRESERVED AREAS IDENTIFIED AS DEAD, POTENTIALLY HAZARDOUS OR IN POOR CONDITION: MAY NEED TO BE REMOVED AS DIRECTED BY THE URBAN FORESTER.						
INSTALLATION OF TREE PROTECTION FENCE	AFTER UFMD'S APPROVAL OF LOCATION	THE INSTALLATION OF ALL TREE PROTECTION FENCING WILL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST AS MAY BE REQUIRED BY UFMD. INSTALLATION SHALL BE ACCOMPLISHED IN A MANNER THAT DOES NOT HARM EXISTING TREES AND VEGETATION TO BE PRESERVED. AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRADING OR DEMOLITION ACTIVITIES AND PRIOR TO THE INSTALLATION OF TREE PROTECTION FENCING. UFMD WILL BE GIVEN THE OPPORTUNITY TO INSPECT THE SITE TO ENSURE THAT ALL INDIVIDUAL TREES TO BE PRESERVED AND ALL AREAS TO BE LEFT UNDISTURBED HAVE BEEN CORRECTLY DELINEATED.						
SITE INSPECTIONS	MONTHLY INSPECTIONS OF SITE OR AS SPECIFIED BY UFMD	THE APPLICANT'S CERTIFIED ARBORIST (IF REQUIRED) SHALL MONITOR THE SITE TO ENSURE THAT INAPPROPRIATE ACTIVITIES SUCH AS THE STORAGE OF CONSTRUCTION MATERIALS, DUMPING OF CONSTRUCTION DEBRIS, AND TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL DO NOT OCCUR WITHIN THE TREE PRESERVATION AREAS						

#### **CERTIFIED ARBORIST**



Expiration Date

**CERTIFIED ARBORIST** 

Dec 31, 2011

10105 Residency Road, Suite 207 Manassas, Virgina 20110 Tel (703) 331-3731 Fax (703) 331-1359

ORIGINAL TREE INVENTORY AND CONDITION ANALYSIS DONE BY ZIMAR AND ASSOCIATES, INC. IN SEPTEMBER 2007 AND UPDATED AND FIELD VERIFIED BY DENNIS DIXON, CA IN MAY 2010.

Zimar & Associates, Inc.

ARBORICULTURE FORESTRY CONSULTING

2. SEE SHEET 6 FOR TREE PRESERVATION TARGET AND STATEMENT (10-YEAR TREE CANOPY CALCULATIONS). - PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL INDIVIDUAL AND GROUPS OF TREES MARKED FOR PRESERVATION SHALL BE PROTECTED WITH TREE PROTECTION FENCING WHERE IDENTIFIED ON THE PLAN.

- TREE PROTECTION FENCE SHALL BE POSITIONED DIRECTLY IN THE ROOT PRUNING TRENCH AND BACKFILLED FOR STABILITY OR JUST WITHIN THE DISTURBED AREA.

- TREE PROTECTION FENCING SHALL CONSIST OF FOUR FOOT 14-GUAGE WELDED WIRE OR CHAIN LINK FENCE ATTACHED TO SIX FOOT TALL STEEL POSTS DRIVEN 18 INCHES INTO THE GROUND. POSTS SHALL BE NO FURTHER THAN 10 FEET APART.

- WHERE APPROPRIATE, BASED ON EROSION AND SEDIMENT CONTROL PLANS, SUPER SILT FENCE MAY BE USED AS TREE PROTECTION FENCING WITH THE APPROVAL OF FAIRFAX COUNTY.

- TREE PROTECTION FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL CONSTRUCTION PERSONNEL. SIGNS, IN ENGLISH AND SPANISH, WHICH STATES "TREE PRESERVATION AREA - KEEP OUT" SHALL BE INSTALLED ON TREE PROTECTION FENCING EVERY 30 FEET.

- A CERTIFIED ARBORIST MAY BE REQUIRED TO MONITOR THE INSTALLATION OF TREE PROTECTION FENCING AS DIRECTED BY THE UFMD.

**\TREE PROTECTION FENCE** 14 / NOT TO SCALE

12A1-8098Tree Protect

10' OR LESS ON

CENTER

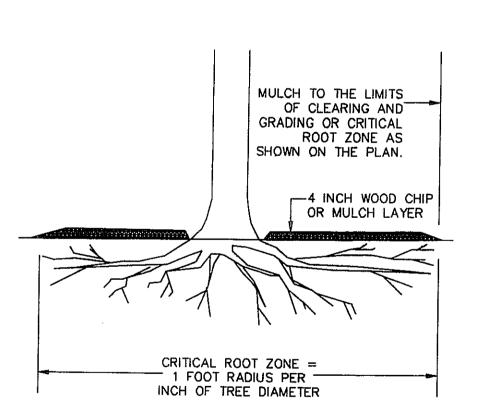
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TREE

**PRESERVATION** 

SIGN

4 SIGN



- SPREAD WOOD CHIPS OR MULCH BY HAND TO A UNIFORM THICKNESS OF 4

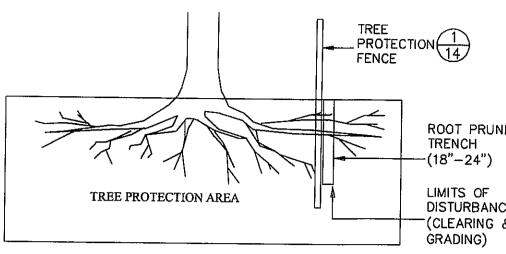
- WOOD CHIPS OR MULCH SHALL COVER AS MUCH OF THE ENTIRE CRITICAL ROOT ZONE AS POSSIBLE UP TO 10' FROM THE LIMITS OF CLEARING AND GRADING.

- WOOD CHIPS OR MULCH SHALL CONSIST OF A WOODY MATERIAL THAT HAS BEEN CHIPPED OR SHREDDED OR OTHER APPROVED MATERIAL

- WOOD CHIPS OR MULCH SHALL NOT TOUCH THE BASE OF THE TREE.

3 \ PROTECTIVE MULCHING 14 NOT TO SCALE

12A1-8098 Protect Mulch



- PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL TREES MARKED FOR PRESERVATION ALONG THE LIMITS OF CLEARING AND GRADING SHALL BE ROOT PRUNED WHERE SHOWN ON THE PLAN.

- ROOT PRUNING SHALL BE CONDUCTED USING A TRENCHER VIBRATORY PLOW OR BY OTHER METHODS AS APPROVED BY

- THE ROOT PRUNING TRENCH SHALL BE A MAXIMUM OF 6 INCHES WIDE AND 18-24 INCHES DEEP. ONCE COMPLETED, THE ROOT PRUNING TRENCH SHALL BE IMMEDIATELY BACK FILLED.

- A CERTIFIED ARBORIST MAY BE REQUIRED TO MONITOR THE ROOT PRUNING AS DIRECTED BY THE UFMD.

2 ROOT PRUNING

14 / NOT TO SCALE

## TREE PRESERVATION AREA KEEP OUT

NO EQUIPMENT OR MATERIALS ARE TO BE STORED OR DEPOSITED WITHIN THIS AREA. TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL IS PROHIBITED.

(CONSTRUCTION COMPANY NAME) (COMPANY CONTACT PERSON & TELEPHONE NUMBER)

PENALTY FOR VIOLATIONS STRICTLY ENFORCED

#### SUGGESTED SPECIFICATIONS:

17 INCHES MINIMUM HEIGHT: 11 INCHES MINIMUM BACKGROUND COLOR: LETTER COLOR: BLACK LETTER SIZE:

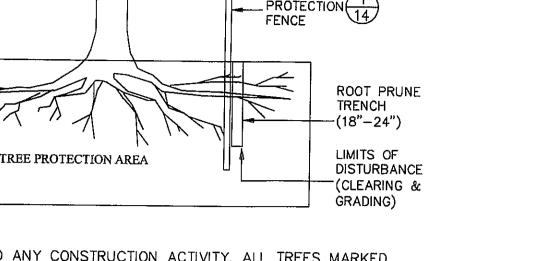
> LETTER 1: 1.5 INCH MINIMUM (LARGEST) LETTER 2: 0.75 INCH MINIMUM LETTER 3: 0.5 INCH MINIMUM LETTER 4: 0.375 INCH MINIMUM (SMALLEST)

NOTE: ALTERNATE SIGNAGE MAY BE ALLOWED BY FAIRFAX COUNTY PROVIDED THAT, AT A MINIMUM, THE SIGN READS 'TREE PROTECTION ZONE - KEEP OUT - OFF LIMITS TO CONSTRUCTION EQUIPMENT. MATERIALS AND WORKERS'. ANY SIGN PROVIDED SHALL BE POSTED IN ENGLISH AND SPANISH,

4 TREE PRESERVATION SIGN

14 / NOT TO SCALE

12A1-8098Tree Preser Sign



12A1-8098 Root Pruning

PRESERV TREE

DETAIL

ATION

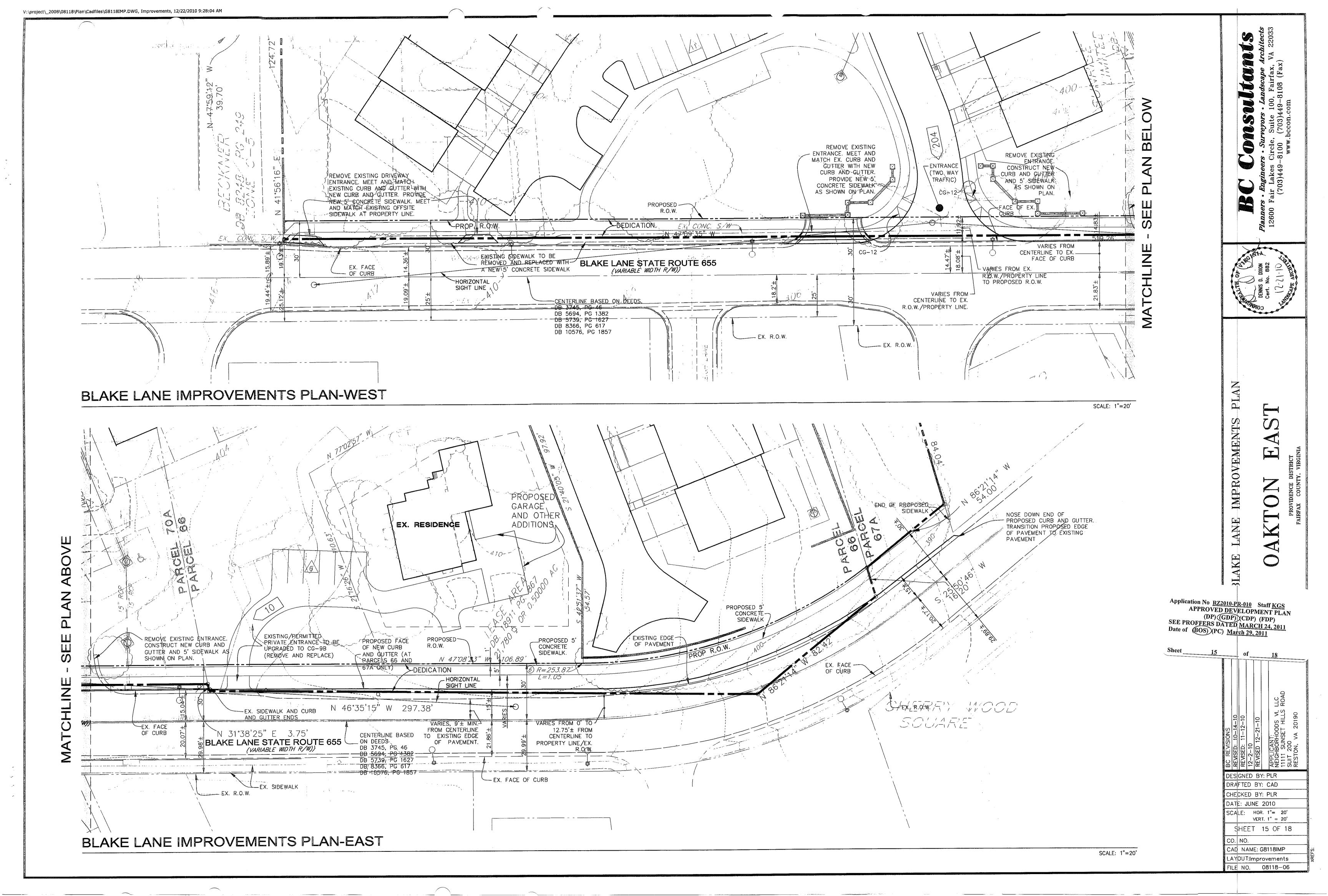
tent.

Application No RZ2010-PR-010 Staff KGS APPROVED DEVELOPMENT PLAN (DP) (GDP) (CDP) (FDP) SEE PROFFERS DATED MARCH 24, 2011 Date of (BOS) (PC) March 29, 2011

DESIGNED BY: PLR DRAFTED BY: CAD CHECKED BY: PLR DATE: JUNE 2010 SCALE: HOR. NA VERT. NA SHEET 14 OF 18 CO. NO.

CAD NAMÉ: G8118TPP

LAYOUT:TREE PRES DET FILE NO. 08118-06



BLAKE LANE - ROUTE 655 ENTRANCE POSTED SPEED 25 MPH 4200 VPD (2008) 3.5' HEIGHT 335' LINE OF SIGHT 3.5' HEIGHT OF OBJECT 3.5' HEIGHT OF EYE EX. GRADE @ 405 CENTERLINE 

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PROFILE DISTANCE SIGHT

Application No RZ2010-PR-010 Staff KGS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED MARCH 24, 2011
Date of (BOS) (PC) March 29, 2011

Sheet	16				_	of			_1	8		
	BC REVISIONS	SHEET ADDED: 10-14-10	11–12–10	12-2-10	12–21–10		APPLICANT: NEIGHBORHOODS VI, LLC	11111 SUNSET HILLS ROAD	SUIT 200	RESTON, VA 20190		
	2	SIC					LR					
	<b>!</b>	RAF		:	BY:		AD				-	
	CHECKED BY: PLR DATE: JUNE 2010											
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	FIL	E_	NO	,	(	081	18-	06	;		200	

MANUFACTURER:

VICTOR STANLEY, INC. P.O. Drawer 330, Dunkirk, Maryland 20754 USA Toll Free: 1-800-368-2573 Tel: 1-301-855-8300 Fax: 1-410-257-7579 www.victorstanley.com

MODEL:

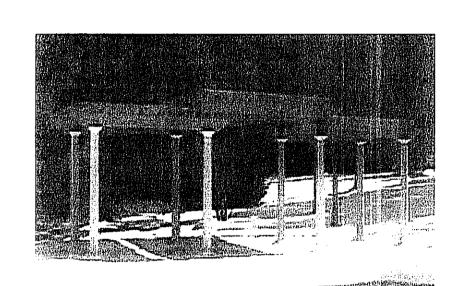
C-10 Bench OR EQUAL

INSTALL PER MANUFACTURER'S SPECIFICATION

BENCH **17** / РНОТО

NOT TO SCALE

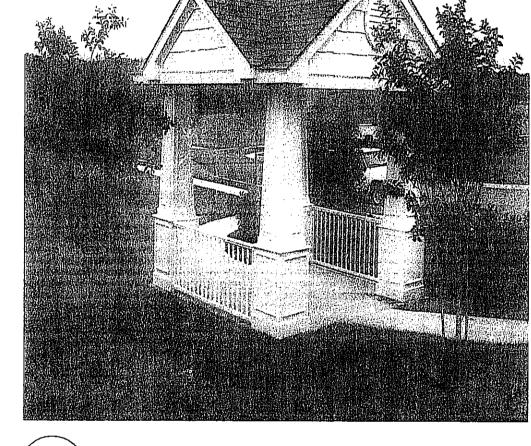
23B-8118bench



TRELLIS TO BE BUILT BY THE APPLICANT. STYLE MAY CHANGE TO COORDINATE WITH OTHER COMMUNITY FEATURES.



NOT TO SCALE 11C-6075TRELLIS



OPTIONAL PAVILION

17 IF PROVIDED, THE PAVILION WILL BE BUILT BY THE APPLICANT.
THE PAVILION'S STYLE AND FEATURES MAY CHANGE TO
REFLECT THE ARCHITECTURE OF THE TOWNHOMES.



POLE LIGHT 1

MANUFACTURER: HOLOPHANE

HP19712 WITH CUT-OFF LUMINAIRE OR EQUAL MODEL:

POLE: 14' HIGH (P14SF/18FB-CA/BK)

COLOR: BLACK

LAMP: 150 MH

NOTE: INSTALL PER MANUFACTURER'S SPECIFICATION

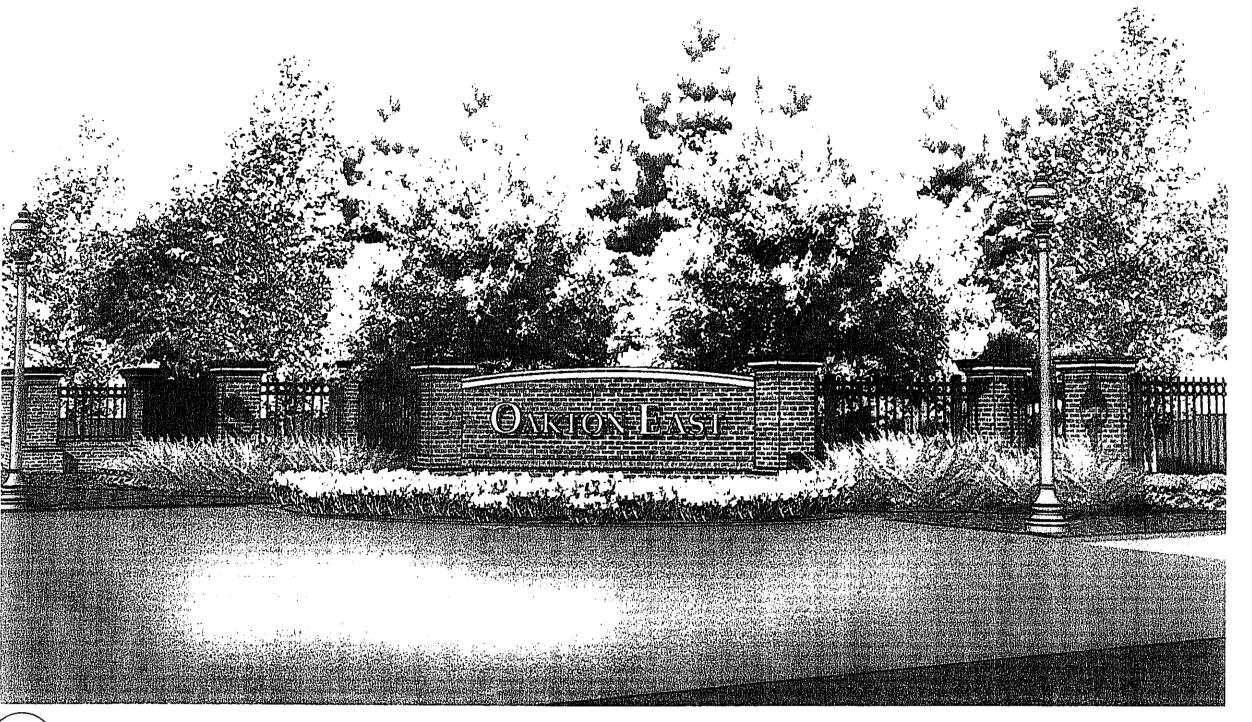
APPROXIMATE LOCATIONS OF THE STREETLIGHTS ARE SHOWN ON THE PLAN. THE FINAL NUMBER AND LOCATIONS OF THE LIGHTS MAY CHANGE WITH FINAL ENGINEERING AND A PHOTOMETRIC ANALYSIS.

OR APPROVED EQUAL

STREETLIGHT

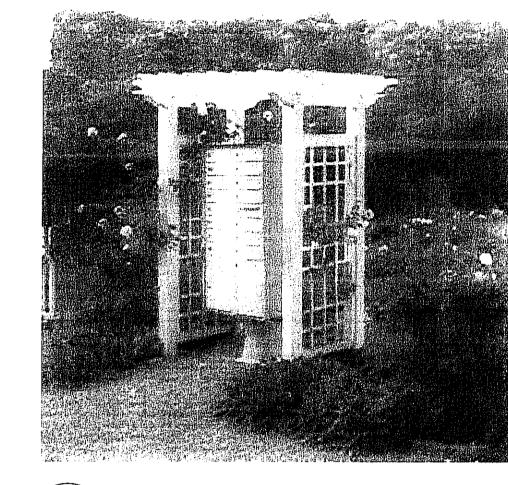
NOT TO SCALE

8A-3103\_PaleIt-GranvI\_1



5 \ ENTRY SIGN

(FOR ILLUSTRATIVE PURPOSES ONLY TO CERTIFY THE QUALITY OF DESIGN. THE FINAL ENTRY DESIGN MAY CHANGE BUT SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE TYPES OF MATERIALS AND THE TYPES AND EXTENT OF FEATURES DEPICTED HEREON. THE SIGN MAY BE CONSTRUCTED WITH BRICK (SHOWN), STONE, ARCHITECTURAL BLOCK OR OTHER SIMILAR SURFACE TREATMENT.)



6 COMMUNITY MAIL BOXES

LOCATIONS TO BE DETERMINED. ARBOR TO BE BUILT BY THE APPLICANT. STYLE MAY CHANGE TO COORDINATE WITH OTHER COMMUNITY FEATURES.

AMENITY

Application No <u>RZ2010-PR-010</u> Staff <u>KGS</u> APPROVED <u>DEVELOPMENT PLAN</u> (DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED MARCH 24, 2011
Date of (BOS) (PC) March 29, 2011

DESIGNED BY: PLR DRAFTED BY: CAD CHECKED BY: PLR DATE: JUNE 2010 SCALE: HOR. AS SHOWN VERT.

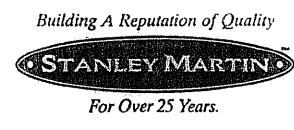
SHEET 17 OF 18

CAD NAME: G8118AMENITY

LAYOUT: PARK AREA FILE NO. 08118-06

CO. NO.

STAMPED-ASPHALT (PAVING PATTERN TO BE DETERMINDED) FEATURE BENCH, 4 OPTIONAL PAVILION TYP. **OPEN LAWN AREA** 3 STREETLIGHT, TYP. POSSIBLE 5 ENTRY 17 STAMPED ASPHALT CROSSWALK
(PAVING PATTERN TO BE
DETERMINDED) OPEN LAWN AMENITY AREA SCALE: 1"=20'







36' TOWNHOMES

Application No <u>RZ2010-PR-010</u> Staff <u>KGS</u>

APPROVED DEVELOPMENT PLAN

(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED <u>MARCH 24, 2011</u>

Date of (BOS) (PC) <u>March 29, 2011</u>

eet	18	of	<u>18</u>

(C) DEVEREAUX I ASSOCIATES P.C. EXPRESSIT RESERVES ITS COMMON LAW COPTRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF DEVEREAUX I ASSOCIATES P.C.

12			
	DESIGNE	D BY:	PLR
	DRAFTE	D BY:	CAD
	CHECKE	D BY:	PLR
	DATE: J	UNE 2	010
	SCALE:	HOR.	1"=10

VERT. NA SHEET 18 OF 18

ELI

ILLUSTRATIVE

CO. NO CAD NAME: G8118ELE

LAYOUT: ELEVATIONS FILE NO. 08118-06